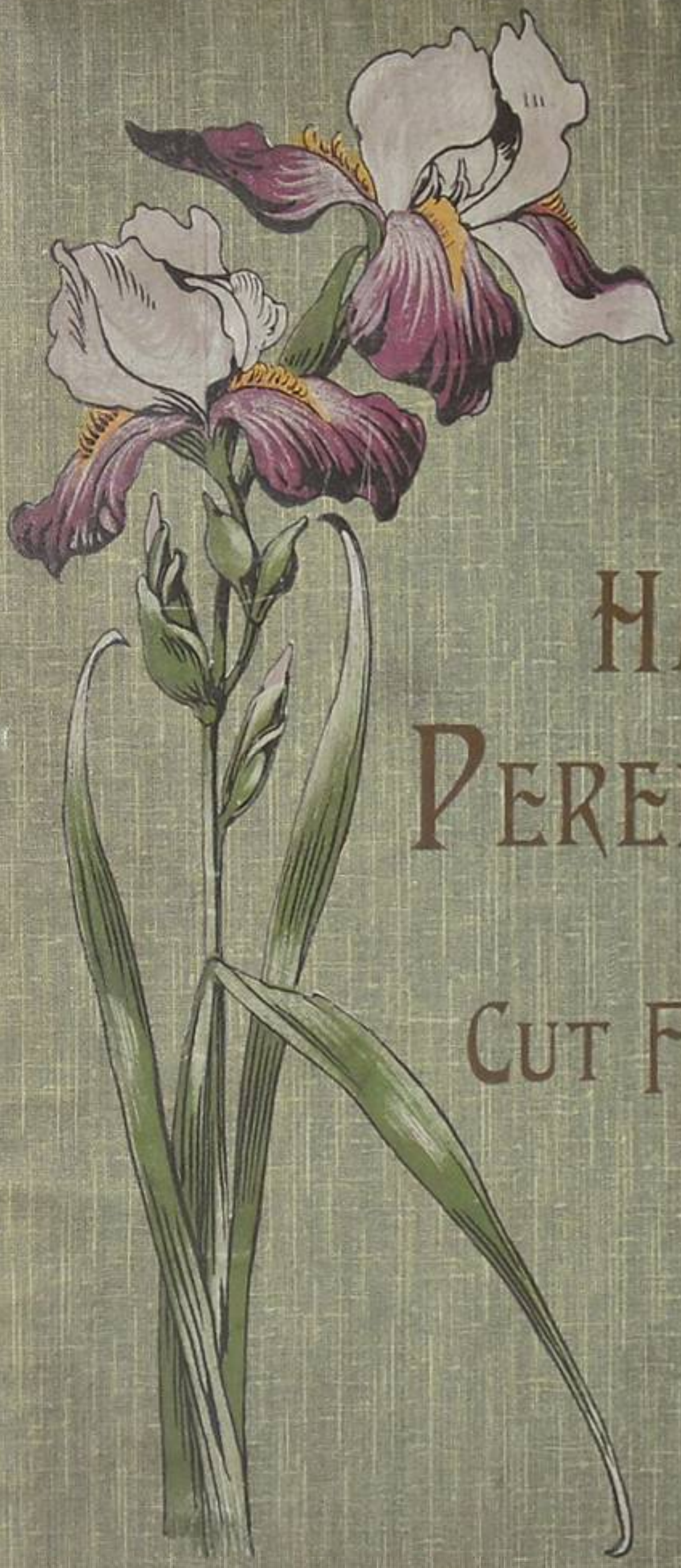

THE BEST HARDY PERENNIALS FOR CUT FLOWERS

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

SB
406
.M62

THE BEST HARDY PERENNIALS.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

THE BEST

HARDY PERENNIALS

FOR PRODUCING AN ABUNDANT SUPPLY OF

CUT FLOWERS

AND ALSO FOR FURNISHING AN

EFFECTIVE DISPLAY OF BRIGHT COLOURS IN THE GARDEN.

CONTAINING FORTY-EIGHT COLOURED PLATES,

BEING FAITHFUL DRAWINGS FROM NATURE OF POPULAR HARDY PERENNIALS;
ALSO FULL DESCRIPTIONS AND MANY PRACTICAL HINTS REGARDING
CULTIVATION, ARRANGEMENT, ETC., ETC.

BY

F. W. MEYER.

LIVERPOOL:
BLAKE AND MACKENZIE, SCHOOL LANE.
1901.
ENTERED AT STATIONERS' HALL.]
[ALL RIGHTS RESERVED.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

LIST OF COLOURED PLATES.

PLATE I.

1. Achillea mongolica.
2. Achillea ptarmica fl. pl., "The Pearl."

PLATE II.

1. Anemone japonica, "Honorine Jobert."
2. Anemone japonica, "Brilliant."
3. Anemone japonica elegans.
4. Anemone japonica, "Queen Charlotte."
5. Anemone japonica, "Whirlwind."

PLATE III.

1. Anemone sylvestris var. grandiflora.
2. Anemone sylvestris fl. pl.

PLATE IV.

Aquilegia hybrida, in various forms.

PLATE V.

Aquilegia vulgaris var. stellata.

PLATE VI.

1. Aruncus sylvester var. Kneiffi.
2. Astilbe Lemoinei.

PLATE VII.

1. Aster alpinus albus.
2. Aster alpinus var. superbus.
3. Aster diplostephioides.
4. Aster peregrinus.

PLATE VIII.

1. Aster Novæ-Angliæ.
2. Aster Novæ-Angliæ var. ruber.
3. Aster Amellus bessarabicus.
4. Aster Novi-Belgii var. densus.
5. Aster Novi-Belgii, "Robert Parker."

PLATE IX.

1. Aster Novi-Belgii var. candidissimus.
2. Aster Novi-Belgii var. candidissimus.
3. Aster cordifolius.
4. Aster cordifolius var. major.
5. Aster grandiflorus.
6. Aster Tradescantii.

PLATE X.

1. Campanula persicifolia var. grandiflora.
2. Campanula persicifolia grandiflora alba.
3. Campanula persicifolia grandiflora alba fl. pl.
4. Campanula persicifolia alba coronata.
5. Campanula latiloba.

PLATE XI.

1. Centaurea montana.
2. Centaurea montana alba.
3. Centaurea montana rosea.
4. Centaurea montana sulphurea.

PLATE XII.

1. Centaurea dealbata.
2. Centaurea ruthenica.

PLATE XIII.

Chrysanthemum maximum in various forms.

PLATE XIV.

Chrysanthemum (Pyrethrum) uliginosum.

PLATE XV.

1. Delphinium sinense grandiflorum.
2. Delphinium nudicaule.
3. Delphinium Zalil (*syn.* sulphureum).

PLATE XVI.

1 and 2. Delphinium hybridum, single forms.
3 to 6. Delphinium hybridum, double forms.
7. Delphinium hybridum, "Belladonna."
8. Delphinium sinense flore erecto.

345044

Digitized by Google

Original from UNIVERSITY OF MICHIGAN

LIST OF COLOURED PLATES.

PLATE XVII.

Delphinium sinense var. grandiflorum, in five different colours.

PLATE XVIII.

1. Doronicum caucasicum.
2. Doronicum plantagineum excelsum, "Harpur Crewe."

PLATE XIX.

1. Echinacea (*syn.* Rudbeckia) angustifolia
2. Echinacea (*syn.* Rudbeckia) purpurea.

PLATE XX.

1. Echinops ruthenicus.
2. Echinops hybridus.
3. Echinops Ritro.

PLATE XXI.

1. Erigeron aurantiacus.
2. Erigeron Coulteri.
3. Erigeron speciosus (*syn.* Stenactis speciosa).

PLATE XXII.

1. Eryngium alpinum.
2. Eryngium maritimum.
3. Eryngium Zabeli.

PLATE XXIII.

Gaillardia hybrida grandiflora.

PLATE XXIV.

Helenium Hoopesi.

PLATE XXV.

Helianthus giganteus.

PLATE XXVI.

1. Helianthus rigidus.
2. Coreopsis grandiflora.

PLATE XXVII.

"Lenten Roses," in various forms.

PLATE XXVIII.

1. Hesperis matronalis alba.
2. Hesperis matronalis flore albo pleno.
3. Arabis alpina fl. pl.

PLATE XXIX.

1. Heuchera sanguinea.
2. Heuchera sanguinea alba.
3. Heuchera rosea (Zabel).
4. Heuchera rubescens.

PLATE XXX.

1. Inula glandulosa.
2. Inula glandulosa laciniata.
3. Inula macrocephala

PLATE XXXI.

Varieties of "German" Iris.

PLATE XXXII.

Iris Kæmpferi (*syn.* I. lævigata).

PLATE XXXIII.

1. Lupinus arboreus.
2. Lupinus arboreus albus.
3. Lupinus nootkatensis.
4. Lupinus polyphyllus.
5. Lupinus polyphyllus albus.

PLATE XXXIV.

1. Papaver nudicaule.
2. Papaver nudicaule album.
3. Papaver nudicaule miniatum.

PLATE XXXV.

1. Phlox divaricata L. (*syn.* Phlox canadensis, *Sweet*).
2. Phlox divaricata alba (*syn.* canadensis alba).
3. Phlox reptans (*syn.* stolonifera).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

LIST OF COLOURED PLATES.

PLATE XXXVI.

Hybrid Phloxes.

1. Coquelicot.
2. Etna.
3. Mrs. Croll.
4. Sybille.
5. Snowdon.
6. Mrs. Jenkins.

PLATE XXXVII.

1. Physalis Alkekengi.
2. Physalis Franchetti.

PLATE XXXVIII.

1. Physostegia virginiana.
2. Physostegia virginiana alba.

PLATE XXXIX.

1. Polygonum compactum.
2. Polygonum polystachyum.
3. Polygonum sacchaliense.

PLATE XL.

1. Primula cortusoides.
2 to 5. Garden varieties of Primula cortusoides Sieboldi.

PLATE XLI.

Primula elatior gigantea, in variety.

PLATE XLII.

Pyrethrum roseum, in single and double forms.

PLATE XLIII.

1. Rudbeckia fulgida.
2. Rudbeckia maxima.
3. Rudbeckia laciniata fl. pl. "Golden Glow."
4. Rudbeckia speciosa (*syn*. R. Neumannii).

PLATE XLIV.

1. Scabiosa caucasica alba.
2. Scabiosa caucasica fimbriata perfecta.
3. Scabiosa caucasica magnifica.
4 to 6. Scabiosa caucasica hybrida.

PLATE XLV.

Senecio pulcher.

PLATE XLVI.

1. Trollius asiaticus.
2. Trollius asiaticus "Orange Globe."
3. Trollius europæus.
4. Trollius europæus sulphureus.

PLATE XLVII.

1. Viola cornuta (type).
2 to 5. Hybrid forms of Viola cornuta.

PLATE XLVIII.

1. Wahlenbergia grandiflora (*syn* platycodon grandiflorum).
2. Wahlenbergia grandiflora alba (*syn*. platycodon grandiflorum album).

Digitized by Google

Original from UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

PREFACE.

THE present work is not intended as a complete handbook on that most extensive class of plants termed "HARDY PERENNIALS" or "HARDY HERBACEOUS PLANTS," but rather as a selection among the many hundreds of different varieties of such as may claim special merit on account of

(a) Their extreme hardiness, even in the northern counties;

(b) Their beauty of form and colour;

(c) Their suitability for supplying cut flowers, both naturally and when forced.

The 48 coloured plates with which this work is illustrated are the work of Mr. Walter Müller, at Gera (Saxony), and appeared (though in different order) in the German work, "*Die schönsten Stauden*," written by Mr. Max Hesdörffer, the Editor of one of the principal Continental horticultural journals, "*Die Gartenwelt*," assisted by German growers of hardy plants, and published by Mr. Gustav Schmidt, Berlin.

The present English edition, however, contains but very little of the original matter in the form of translation, as, in order to make the work of really practical use to the British cultivator, it was necessary to deal with entirely different conditions of climate, &c. In Great Britain, too, the number of varieties of plants which may be successfully grown out of doors is very much greater than on the Continent. For this reason I have included in this work a great number of plants which, although not illustrated by coloured plates, and not mentioned in the original German work, deserve, nevertheless, a prominent place in British gardens. In the case of plants of exceptional beauty I have also mentioned a few of such tender plants as are hardy in the western and southern counties, but require protection during winter in the north.

Having been connected for 25 years with a well known firm in the West of England, where Hardy Perennials form one of the leading features, my notes on all these plants are based entirely on practical experience. With a view to facilitating an easy reference I have, as far as possible, enumerated the plants in alphabetical order.

F. W. MEYER.

Exeter,

May, 1901.

Digitized by Google

Original from UNIVERSITY OF MICHIGAN

INTRODUCTION.

THE term "HARDY PERENNIALS," or "HARDY HERBACEOUS PLANTS," as now generally used, does not embrace all perennial flowers, but chiefly the stronger and bolder kinds, such as will grow in ordinary soil in an open border and will last at least for several years.

The value of Herbaceous Plants seems to become more recognised from year to year. It is, however, only of late years that the cultivation of these plants has advanced with rapid strides and has found such universal favour with the public generally. It is not a mere craze or fashion, but a recognition of their undoubted merits that has brought these hardy plants to the front, and gained for them the appreciation of the rich as well as the poor. We are living in a progressive age, and by the development of a more artistic taste we have become susceptible to the charms of beauty of form in Nature, and we prefer graceful outlines and harmony of colour to the geometrical designs in the gardens of our ancestors. There exists no class of plants which offers such an unlimited number of graceful forms as the Hardy Herbaceous Plants. Not a single shade of colour can be mentioned which is not in some way or other represented by this class of flowers. The variation of size, too, is simply enormous. We have flowers like Gypsophila paniculata (which are not much bigger than a Mustard seed), and we have flowers of the boldest type measuring six inches and eight inches across. We have plants that never grow beyond a few inches in height, and we have plants that attain six feet, seven feet, or even eight feet. Such unlimited variation in every shape or form cannot be equalled by any other class of plants.

But these hardy flowers have still other merits of greater importance. Many kinds will bloom continuously for several months, while others will bloom at a time of the year when flowers are scarce. Even in December and January we have Christmas Roses out of doors. In February we have Anemone apennina, Arabis albida, and Hepaticas of various shades, to say nothing of the many early bulbous plants. March brings us Adonis vernalis, Iberis stylosa, Mertensia virginica, several Anemones, Doronicums, Omphalodes verna, Lenten Roses, Primulas, and many others. In April we have Dodecatheons, Gentiana acaulis, many Irises, dwarf Phloxes, Trollius, Epimedium pinnatum, Corydalis lutea, Iberis, Aubrietias, Alyssum, and a host of others. I need not mention the flowers of June, July and August. Their name is legion, and we may choose from hundreds of varieties of every shade of colour. But even in September, October and November, when our Dahlias, our annuals and other flowers have vanished, we have still an abundance of hardy flowers out of doors. We have

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Rudbeckias and Achilleas of various sorts, Asters, Physostegia virginica, Helenium Hoopesi, and Helenium grandiceps striatum, Stokesia cyanea, Zauschneria californica, Plumbago Larpentæ, Senecio pulcher, Anemone japonica, Pyrethrum uliginosum, and many other excellent things. There is thus not a single month in the whole year in which hardy flowers of one sort or another are not available, and if we make a careful selection our gardens need never be entirely without flowers.

With regard to position, too, we have plants suitable for every conceivable situation, no matter whether it be dry or wet, sunny or shady, warm or cold; it is simply a matter of selecting the right thing for the right place. Even bare spots beneath the shade of trees, where not even Grass would grow, can be made bright and cheerful by such plants as hardy Cyclamen, Hepatica, Anemone, Primula, Epimedium, Trillium and many others, to say nothing of an admixture of such hardy bulbs as Dog's-tooth Violets, Snowdrops, Daffodils and Winter Aconite. If we have rough waste spots in a wood or shrubbery, we can turn them into a charming "wild garden" by dotting about irregular groups of plants of the boldest type, such as the Giant Cow Parsnip (Heracleum giganteum), Telekia cordifolia, or Cephalaria alpina. Here, too, we may have colonies of Foxgloves, Verbascum, Anemone japonica, and scores of others. If we have a wet or swampy place near a pond we may grow colonies of Iris, and such handsome foliage plants as Saxifraga peltata, Rodgersia podophylla, Gunnera scabra and manicata.

The landscape gardener finds among Hardy Perennials a wealth of material for embellishing his work. The Florist obtains from that class of plants an abundant supply for his trade, especially as many kinds of Herbaceous Plants are well adapted for forcing. Finally, every one who owns a garden, no matter whether it may be a few yards near the peasant's modest cottage, or many acres surrounding the mansion of the squire, finds among these hardy flowers the means to make the home more bright and cheerful almost all the year round.

I will now endeavour to show, by general practical hints, how to arrange these plants to the best advantage.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

ARRANGING HARDY PERENNIALS WITH A VIEW TO SUCCESSIVE EFFECT.

MUCH depends of course on the purpose for which the flowers are to be grown. If cultivated for the exclusive purpose of supplying cut flowers for the house or for sending away, there is no need to have them in the flower garden at all. They might in this case be grown in a border in the kitchen garden, or some other spot set apart for them in a situation where disfigurement by constant cutting would be of little consequence. In such a case the arrangement would be more a matter of providing cut flowers of the most desirable colours, and at a season when they are most required, than of artistic grouping. But when Herbaceous Plants are used in the flower garden the grouping must naturally be of the utmost importance, so as to ensure a succession of effective displays. This, in my opinion, is the most essential part of all. The general cultivation of Hardy Plants is easy enough, but arranging them effectively is not so easy as it might appear, and requires not only a considerable amount of taste and forethought, but also an intimate knowledge of the plants to be used. Before we can hope to arrange them effectively we must know to what size they will grow; we must also be acquainted with the colour of the flowers, the time of blooming, and the behaviour of the plants after their flowering season is over. It is not enough to arrange the Herbaceous Plants themselves so as to give the best possible effect, but we have also to associate them with other suitable kinds of plants, such as Bulbs, Shrubs, or Ferns, and we have to blend the whole into one harmonious picture, or rather a succession of harmonious pictures, for the combinations will gradually change from week to week as the season advances. Thus we may have, for instance, a colony of blue flowers springing up in a place that bore white blossoms a week ago, and before the blue has quite faded from sight we may have sheets of pink or yellow appearing above the foliage.

In arranging Perennials for effect we may group them either in borders or flower beds, or we may use them to heighten the effect of other plants. Let us then consider Borders first, and enquire into the most advantageous method of dealing with them.

BORDERS.

Years ago the orthodox style of border in the flower garden was the ribbon border, in which bedding plants were displayed in continuous lines with geometrical exactness. Of these it might well be said that if you had seen a yard you had seen the whole, because the same pattern ran through the whole length no matter how long the border might be. This kind of monotonous display, which, moreover, could not last longer than three or four months every

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

year, is now, I am glad to say, almost a thing of the past, and has given way to the Hardy Plants, with the result that we have now not a monotonous and temporary, but a continuous and picturesque mode of display almost all the year round.

Borders in the flower garden may sometimes be in a straight line, either quite open or bounded on one side by a wall or trellis covered with all kinds of creepers. But there can be no doubt that the most effective border is that which has an irregular outline, and is arranged against a background of ornamental trees and shrubs. As a rule such borders are not made nearly wide enough to allow all plants to develop their full beauty without becoming overcrowded. Now and then the choicest shrubs of the background should project into the border and mingle with the hardy flowers, while in other places the border itself should break the line of shrubs by forming here and there a deep recess among the taller plants. Such a border should never be dug over (unless in the course of years it should require to be altogether rearranged), and it should never show a single yard of bare soil either in winter or summer, and in this direction I think the borders of most gardens may be greatly improved.

The worst fault of most borders is that they are generally arranged with far too much regularity. As a rule people are content to have their tall plants at the back and the small ones in the front, leaving the ground between perfectly bare. The result is a more or less regular bank during the summer months and a bare soil during winter. But there is just as much difference between this and the picturesque style of arranging borders as there is between a group of lovely Orchids and choice stove and greenhouse plants arranged for effect at one of our principal exhibitions, and another group forming a more regular bank of flowers and foliage arranged with such painful exactness, that its outline might be compared to the sloping roof of a house. In a well arranged group, as now often exhibited for effect, we have short plants among taller ones, springing from a dense carpet of Maiden-hair Fern or other greenery, studded with flowers, but all plants are or should be so placed that the eye can penetrate and admire the full beauty of each individual flower or foliage plant, while the whole combination has a most pleasing and graceful effect. Why is it that plants grouped in this manner and offering, as it were, a series of vistas, through which the shorter plants are distinctly visible, are so pleasing to the eye? It is because this combination picture produces different effects of light and shade, and each visible short plant between the taller ones becomes in itself a picture viewed through the living frame of other plants.

This, then, is the style which should be our pattern when grouping plants out of doors; it is on the principle of the true style of Nature and will lend itself to an infinite number of most effective variations. Instead of leaving the soil bare between the taller plants, let us carpet it with flowers and greenery, just like Nature would clothe the bare soil of our woods with all kinds of dwarf vegetation, or as we would do in the case of a group of Orchids arranged for effect at an exhibition. We have an endless variety of Hardy Plants suitable for the purpose. What could be prettier than a colony of bright flowers springing from a carpet of the woolly Thyme (Thymus lanuginosa), or such plants as Herniaria glabra, Arenaria cæspitosa, mossy Saxifrages, Veronica repens, &c. Or if we desire carpets of a lighter colour, we have Phloxes, Veronicas, Erysimum, Alyssum, Arabis, Aubrietia, Iberis, Campanulas, and scores of other

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

varieties to choose from. Surely there is no excuse for bare spots when we have such delightful evergreens as these to cover the ground.

The larger Herbaceous Plants should be arranged not singly, but in groups, intermingling with each other. One or two large groups of plants of the same variety, consisting, say, of from ten to twenty plants, kept sufficiently far apart to allow the plants which form the groundwork to be plainly seen, will be found much more effective than dotting the same number of plants about in a sort of general mixture. Bulbs of all kinds are a valuable addition to borders intended for successive displays. Take, for instance, that charming early spring flower, Chionodoxa, growing from a carpet of Veronica repens. When the blue flowers of Chionodoxa have faded away, the white flowers of the Veronica would take their place, to be followed, perhaps, by the scarlet Windflower, and later on by Platycodon, which in its turn might be succeeded by the white Physostegia virginica, or late in autumn by the purple flowers of Senecio pulcher, which often will last till November. In an adjoining group we may have a bright pink carpet of Phloxes (setacea varieties), to be followed by Narcissus, which will look all the brighter for the dwarf carpet covering the ground beneath them. When the Narcissus have had their turn, we may have Carnations or blue Campanulas, to be followed in autumn by the scarlet Lobelia or white Anemone japonica. Another good combination is a group of Lilies with an undergrowth of Iberis and Epimedium and mixed with Pæonies. The Iberis would be the first to flower, the Pæonies coming next, and by the time these have died away the Lilies would come out in all their glory, and now the flowerless Iberis would form a dark green carpet mixed with the bronzy tint of the Epimedium, thus giving by way of contrast a bold relief to the Lilies. As an example of a pretty group without bulbs, I would mention a combination which I have used with great success, and consisting of Primula Sieboldi, Spiræa filipendula and Plumbago Larpentæ. When in early spring the Primulas were in full bloom, the Plumbago plants did scarcely show a leaf above the ground, while the Fern-like foliage of the Spiræa filipendula formed an exquisite setting for the bright-coloured blooms of the Primulas. No sooner had the latter died away when the handsome trusses of white Spiræa flowers appeared, followed later by the brilliant blue of Plumbago Larpentæ, lasting till late in October. I could quote other examples by the score, but I think I have said enough to show the enormous advantage of this system of arranging plants as compared with the old-fashioned style of mixed borders.

Perhaps no climate in the whole world is more suitable for the cultivation of Hardy Perennials than that of Great Britain, with its mild winters and temperate summers; and there can be no doubt that in a general way this class of plants is perhaps more popular in this country than in any other.

There is, however, one method of arranging choice Hardy Perennials, which, though extensively practised on the Continent, is not looked upon in this country as favourably as it deserves to be, and that is the dotting about of single specimens or colonies of handsome Perennials over the lawn, especially near groups of shrubs or irregular borders, such as I have described above. The effect of such an arrangement would be a breaking and an almost complete obliteration of any hard and fast margins around groups of plants, and a gradual blending

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

and amalgamating of Shrubs, Perennials and Lawn into one harmonious picture. Many Continental gardens, especially in Germany, contain charming arrangements of this kind, which greatly enhance their natural appearance. Some of the best English gardens, too, are arranged on that principle, as for instance, the lovely garden of Miss Willmott, in Warley Place; but in ninety-nine cases out of one hundred a hard and fast line of grass is preferred for a margin "because it is easier cut with a mowing machine." But the difference in effect of the natural arrangement is well worth the expense of a little extra clipping of grass between the plants. It is a curious fact, that, whilst the average Briton will readily spend more money in the initial construction of his garden than his Continental neighbour, the latter will spend twice or three times as much as his British cousin in the maintenance and care of his garden.

Borders made expressly for the purpose of supplying flowers for cutting should not be more than seven or eight feet wide, so that the flowers could be reached comfortably from either side without trampling on the ground between the plants.

FLOWER BEDS.

Beds of all shapes and sizes can be most satisfactorily and permanently decorated by Hardy Herbaceous Plants instead of Bedding Plants. Take, for instance, a bed of yellow or orange Carnations in a setting of purple Violas, or a bed of red Roses springing from a carpet of mossy Saxifrages, which in spring would be covered with charming white flowers before the Roses appear, and in winter would clothe the ground with luxuriant verdure when the stems of the Roses are bare. Or take a bed of delicately coloured Tea Roses on a carpet of crimson Thrift or the bright blue Veronica prostrata, or yellow Roses among purple Aubrietias. Mr. Robinson, the editor of "The English Flower-garden," has grown his Roses in this manner for years with the greatest success, and his Flower-garden at Gravetye Manor, in Sussex, is a charming one.

Small beds in the flower garden we might fill with Crocus, to be succeeded by Campanula carpathica or turbinata, which in its turn might be followed by that grand yellow autumn flower, Helenium pumilum. But also large beds of shrubs might be fittingly relieved by hardy flowers, as, for example, the large Rhododendron bed in the gardens of Baron Rothschild, which is relieved by an exquisite display of tall Delphiniums when the Rhododendron flowers are over. In a like manner will the effect of a bed of dwarf Veronicas (V. carnosula and V. buxifolia) be enhanced by scarlet Lobelia or other autumn flowers.

Equally striking effects may be produced by other combinations, but I hope the examples given will sufficiently illustrate the fact that a class of plants so capable of further development, and so admirably suited for the permanent embellishment of our flower gardens, offers one of the richest fields for horticultural research, and is well worthy the attention of every gardener and every lover of flowers throughout the land.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

CULTIVATION.

AS detailed hints regarding cultivation are given with each plant described in this work, I will here give only a general outline on this subject.

PROPAGATION is effected by seed, cuttings or by division. The last named method is most suitable for plants forming fresh crowns from the roots, while seeds give the best results in the case of plants with large tap-roots. The best time for either sowing or dividing is from autumn till early spring. Seeds are best sown in pots or small boxes put into cold frames, and when the young plants are large enough they may be pricked off in the usual way, and in due course they may be repotted and plunged in sand or ashes till required for planting out. Some will flower the first year, but other kinds take two years or more to develop. If propagation by division is performed during a mild winter many of the plants so divided may be planted at once where they are wanted; but if quantities of rare or choice kinds are required for making new beds or borders, it would be best to obtain well established plants in pots, which can generally be depended upon as giving more satisfactory results, and which, moreover, can be transplanted at any time.

The land, which is to be planted, may be trenched to a depth of 2½ feet, and should be well drained. The admixture of some well rotted manure and a little leaf mould is also advisable.

Hardy Perennials look most graceful without any supports, but, where in exceptionally exposed positions it is necessary to tie the plants to sticks or other supports, this operation should be performed in such a manner as not to mar the natural beauty of the plants. Nothing looks more horrible than to see a large single stick driven in by the side of tall, bushy Perennials, and the latter tied about the middle and secured to the stick by a single tie, giving the plants the appearance of ugly mops and brooms where natural grace and beauty should prevail.

F. W. MEYER.

Exeter,

May, 1901.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

Achillea mongolica *Fisch.*

AND

Achillea Ptarmica L. fl. pl., "The Pearl."

(See Plate 1.)

The illustrated forms of Achillea are among the most valuable of hardy flowers for cutting. Their pure white colour and their long stems make them special favourites of the florists, who use them most advantageously for wreaths or bouquets.

Achillea mongolica is a native of northern China, it grows about 18 inches to 2 feet high, and unfolds its handsome single white flowers in June, while those of *Achillea Ptarmica fl. pl.* appear a month later on stems about 2 feet in height, and last throughout the summer till autumn. The original type of the latter is the well known Sneezewort (*Ptarmica vulgaris*) which is a British plant, but is not to be compared with the beautiful garden variety here illustrated. After flowering, the stems might be cut down to the ground if the plants occupy a prominent position where their somewhat untidy appearance after blooming would be objectionable.

Cultivation is as simple as possible, for the plants will grow rapidly and must be prevented (if in the flower garden) from encroaching upon dwarfer plants. They are readily propagated by division during the winter months.

Other forms of Achillea which are not here illustrated, but certainly deserve a place in every garden of any size, are:—

ACHILLEA EUPATORIUM (Fern-leaved Yarrow), also known under the name of *Achillea filipendula*. This forms a noble plant for the back of a border, where it will attain a size of four to five feet in height. It flowers from June to September, bearing large corymbs of brilliant yellow flowers five inches across. Having a somewhat unpleasant odour it is not a Florist's flower, but as it lasts well when cut, and can, moreover, be cut with stems a yard in length, it is well adapted for bold decorative effects, such as for filling large vases in a hall, &c.

ACHILLEA MILLEFOLIUM ROSEA (Rosy Milfoil), also flowers continuously for several months, and its bright rose-coloured flowers mix well with those of the other varieties mentioned above. It grows about two feet in height and makes a good border plant, but spreads somewhat rapidly and must be kept in check.

ACHILLEA SERRATA has sessile deeply serrated leaves and white flowers similar to *Achillea Ptarmica fl. pl.*, to which, however, it is inferior.

ACHILLEA RUPESTRIS is perhaps the best of the dwarf species. It forms a carpet of white flowers only a few inches in height, and is well adapted for rockwork.

Other dwarf forms of Achillea worth mentioning are *A. umbellata*, *A. Clavennæ*, and the yellow flowering *A. tomentosa*; these, however, are more suitable for a rock-garden than for ornamental borders, and they can scarcely be considered as flowers for cutting.

Digitized by Google

Original from UNIVERSITY OF MICHIGAN

PLATE 1.

1. ACHILLEA MONGOLICA (MONGOLIAN MILFOIL.)

2. ACHILLEA PTARMICA FL. PL., "THE PEARL" (DOUBLE SNEEZEWORT).

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

Anemone japonica *Sieb. & Zucc.*

AND ITS VARIETIES.

(See Plate 2.)

"The Japan Anemone" is so well known as to scarcely need description; its pale rose-coloured flowers appearing not all at once, but in continuous succession from the end of July till late in the autumn, make it a most desirable plant, especially at a time when most flowers begin to get scarce. In mild winters the blooming will last nearly till Christmas. As the flowers themselves are 2 inches to 2½ inches across, and are, moreover, borne on stems nearly a yard in length, this Anemone or "Windflower" is a most striking object among bold hardy plants.

ANEMONE JAPONICA ALBA, or, as it is often called, "Honorine Jobert," is a pure white variety, which first appeared many years ago as an accidental sport from a large plant of the pink variety in the garden of M. Jobert at Verdun-sur-Meuse; it is now immensely popular everywhere, and ranks among the most useful Perennials. Like the type, it will grow in almost any soil, and will even succeed under the shade of trees where little else will grow.

Of late years several new forms have been introduced, some of which are illustrated on Plate No. 2. Fine white forms are "Whirlwind," with semi-double flowers, which are excellent for cutting and for decorative purposes. "Lord Ardilaun" and "Lady Ardilaun" are of a very regular shape, grow about 4 feet high, and bear very large white flowers. *Elegans* is tinted with pink and somewhat bell-shaped, while the newly introduced form known as "Brilliant" (see Plate No. 2) is of a deep rose colour and star-shaped in the arrangement of the petals. "Queen Charlotte" is one of the finest of the latest introductions (see Plate No. 2). Not only are the flowers larger than most other forms, but they are particularly striking on account of their silky appearance. The colour is a delicate pale pink with a darker shade on the reverse side of the petals.

Propagation of the "Japanese Anemones" is best effected by division in early spring. They succeed in almost any position in the border, but, like most plants of Japanese origin, they prefer a somewhat damp and at least half-shady spot to a dry and sunny position. Their suitability for growing even under trees makes them valuable to the landscape gardener, who is thus enabled to plant them in bold masses where many other plants would fail.

Other Anemones appear on the next plate (No. 3).

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

PLATE 2.

JAPANESE ANEMONES IN VARIETY.

1. ANEMONE JAPONICA, "HONORINE JOBERT."
2. ANEMONE JAPONICA, "BRILLIANT."
3. ANEMONE JAPONICA, ELEGANS.
4. ANEMONE JAPONICA, "QUEEN CHARLOTTE."
5. ANEMONE JAPONICA, "WHIRLWIND."

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

Anemone sylvestris L. var. grandiflora

AND THE DOUBLE VARIETY

Anemone sylvestris fl. pl.

(See Plate 3.)

The "Snowdrop Windflower," so called on account of its pretty drooping flower buds, which somewhat resemble a large Snowdrop, is found wild in Siberia and in several parts of Central Europe. But while the wild species are insignificant, the improved garden form here illustrated is a noble and handsome flower most suitable for adorning our gardens, and also for furnishing excellent cut flowers. The large single kind has been obtained by cultivation of the original wild species, while the pretty double variety was recently found in Bohemia, and is still a comparatively new introduction into this country. Both the single and double form of this improved *Anemone sylvestris* flower about April and May, but being most valuable to the Florist they are often made to bloom much earlier by gentle forcing in a cold frame.

The single *Anemone sylvestris grandiflora* has flowers about the size of a crown piece, of the purest satin-white, borne on stems fifteen to eighteen inches high; and a colony of them in a moist and at least half-shady place in a border, or springing up naturally from the sward, has a charming effect.

The double form, *Anemone sylvestris fl. pl.* is pure white, or sometimes creamy white, and flowers abundantly. The coloured plate does hardly do it justice.

Both kinds may be propagated by division. A still quicker method of propagation is that by means of root cuttings. The rhizomes are cut into small pieces and put into boxes containing light sandy soil kept evenly moist.

As this work is to be only a limited selection from the many good things among Hardy Perennials, I will only mention a few of such Anemones as are not illustrated in the two coloured plates (Nos. 2 and 3).

ANEMONE APENNINA forms masses of light blue flowers in early spring, and associates well with Daffodils or other spring-flowering bulbs in the border. Being only a few inches high it forms an excellent carpet.

ANEMONE BLANDA is a variety of the former, distinguished by its larger flowers, which are of a deeper blue. It is most effective planted in masses between taller plants.

ANEMONE FULGENS, with its brilliant scarlet flowers, is one of the brightest gems among spring flowers, and is well worth a place in the front row of a border.

ANEMONE NARCISSIFLORA grows about eighteen inches high, and bears white flowers. This is, perhaps, more suited for a rock garden than for the ordinary border.

ANEMONE PULSATILLA, the shaggy "Pasque Flower," loves a moist and sunny spot, and represents a striking appearance with its bright purple flowers. This, too, is most suitable for rockwork, or for the front of a border.

The smaller Alpine kinds, and the well known bulbous varieties, such as *Anemone coronaria* in its various forms, cannot be included in a work dealing with the bolder kinds of Perennials.

Digitized by Google

Original from UNIVERSITY OF MICHIGAN

PLATE 3.

1. ANEMONE SYLVESTRIS GRANDIFLORA (LARGE SNOWDROP ANEMONE).

2. ANEMONE SYLVESTRIS FLORE PLENO (DOUBLE SNOWDROP ANEMONE).

Google
Original from

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

Aquilegia hybrida. *Hort.*

(See Plate 4.)

The "Columbines," illustrated on Plate No. 4, are distinguished from the common Columbine of our grandfathers by their long spurs, and by having flowers standing up erect instead of drooping. Their value as cut flowers for vases, &c., is greatly enhanced by this erect habit, and also when planted in our gardens it is certainly an advantage to be able to look into the flowers instead of seeing merely the back of their petals. These excellent hybrids were obtained chiefly from crosses between *Aquilegia chrysantha* and the "Rocky Mountain Columbine" (*Aquilegia cærulea*), and vary enormously in colour, ranging from pure white to yellow, blue and white, red and yellow, &c., &c.

Particularly rich in variation is the strain known as VEITCH'S HYBRIDS. If it is desirable to propagate any particular variety, this is best done by division immediately after flowering, say in July, when the plants would be covered with leaves and would be in full vigour. If divided during the autumn or winter months they are almost sure to perish.

The most general method of propagation is by seeds sown in July or August. The young plants thus produced will flower the following season.

It has been found that Columbines planted in a westerly aspect, in rather light soil, last much longer than plants exposed to the full sun, probably because they would thus escape the injurious effects of sunshine immediately after a frosty night during early spring. On the whole, some of the choicer kinds of Columbines are capricious. While in some positions they may be true Perennials lasting for a number of years; they can only be considered of biennial duration in other localities. Moisture seems to be most essential to them, and perhaps moisture of the air, as found in the mountainous districts, is of even greater importance than the moisture of the soil. The lovely *Aquilegia glandulosa*, for instance, lasts for half-a-dozen years or more in Scotland, while in the Midlands and in the South of England, it will often perish, apparently without any visible cause, after the second year. Again, the delightful "Alpine Columbine," whose exquisite beauty and pure blue colour fascinates our vision with an almost magic spell when we are climbing the mountains of Switzerland, often degenerates beyond recognition in our gardens and will seldom last more than a year or two, even when raised from seed gathered in the Alps—such at least is my own experience.

The Hybrids illustrated on Plate No. 4, however, are a more sturdy race and are well adapted for planting in large or small colonies in borders, margins of shrubberies, &c., where they will last for many years.

As cut flowers Columbines last well enough in water, when used for adorning vases, &c., but for wreaths or bouquets they are not so suitable on account of their propensity of fading rather quickly.

Other Columbines are illustrated in the next Plate (No. 5).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

PLATE 4.

AQUILEGIA HYBRIDA.

HYBRID COLUMBINES WITH LONG SPURS AND ERECT FLOWERS.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

Aquilegia vulgaris L. var. stellata. *Hort.*

(See Plate 5.)

The Star-shaped Columbine here illustrated--though a form of the common Columbine (*A. vulgaris*)—has lost all resemblance to its progenitor, and has nothing to remind us of the old Columbine except its leaves. The star-shaped flowers are entirely without spurs, they appear in single as well as in double forms, and vary in colour, white, blue and red being predominant. The habit is dwarf and compact, the plants seldom exceeding 15 inches in height. The flowers are most suitable for cutting on account of their very thin but wiry stems.

Cultivation is very simple indeed, as this variety will grow in almost any soil, and is easily propagated by seed or division. I will now briefly refer to some other forms of Columbines not illustrated.

AQUILEGIA ALPINA—the lovely Alpine Columbine I have already mentioned as being grown only with difficulty in our gardens. It is a lovely flower of a pure azure blue, growing less than a foot in height, and found wild near the snowline on Swiss Mountains. As a highly decorative plant for the select portion of a rockgarden it has few equals if care can be taken to supply it with the even moisture it requires.

AQUILEGIA CANADENSIS (Canadian Columbine), grows 18 inches to 2 feet high, and has showy flowers, which are drooping, and of a bright red or scarlet colour outside and yellow within. It is a native of North America, as the name implies, and is there generally found in rocky places in woods. With us it makes a good border plant in a moist half-shady place.

AQUILEGIA CALIFORNICA (Californian Columbine), grows somewhat taller than the last-named, attaining a height of from 2 to 3 ft. The flowers are red and yellow, and of drooping habit. It frequently dies in the second year, but may be readily reproduced from seed.

AQUILEGIA CHRYSANTHA (Golden Columbine), is a fine Perennial, generally lasting for several years. This also is a native of California. It grows to a height of 3 feet or more, and has golden yellow flowers with long spurs. Being very modest in its requirements it is easy to cultivate. It hybridises most readily with other Columbines, and to propagate it in its true form it must be divided in July after flowering, or seed from the true wild form must be obtained.

AQUILEGIA CŒRULEA (Rocky Mountain Columbine), has already been mentioned as being one of the parents of most of the hybrids now in cultivation, including those illustrated on Coloured Plate No. 4. The flowers grow to a height of about 15 inches, and are erect, with long green-tipped spurs. In most soils it will not last as long as *A. Chrysantha*; while its hybrid forms are more permanent.

AQUILEGIA GLANDULOSA (Siberian Columbine), from the Altai Mountains, is a gem, with large, deep blue flowers with white centre. It grows 9 to 12 inches in height, and loves a cool moist position. For the front of a border or for a prominent place in the rockgarden a more attractive and showy plant can scarcely be found.

There are many other varieties of Columbines, but those mentioned above represent the cream of the genus.

ARABIS ALPINA FLORE PLENO. Most varieties of Arabis are very dwarf spring flowers more suitable for the rock garden than for the border, and quite unsuitable for cutting. But this newly introduced variety which is illustrated in conjunction with Hesperis on Plate 28 is of very quick growth, and bears racemes six to eight inches long, of pure double white flowers, most excellent for cutting, and resembling more a miniature double Stock than an Arabis.

Digitized by Google

Original from UNIVERSITY OF MICHIGAN

PLATE 5.

AQUILEGIA VULGARIS VAR. STELLATA.

STAR-SHAPED VARIETY OF COLUMBINE.

Google

Original from

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

Aruncus sylvester *Kostel.* var. Kneiffii *Zabel.*

AND

Astilbe Lemoinei. *Hort.*

(See Plate 6).

ARUNCUS SYLVESTER is perhaps better known as SPIRÆA ARUNCUS or Goatsbeard, and is a very stately Perennial for our borders, growing about 4 feet in height, and flowering in June. It is so well known as to need no description here. A great improvement of quite recent introduction is the variety illustrated on Plate No. 6, viz., ***Aruncus sylvester var. Kneiffii***; which has pure white flowers, and deeply laciniated foliage of fern-like appearance. Like the type, it loves a moist position, and is easily propagated by seeds or by division.

ARUNCUS ASTILBOIDES (syn. Spiræa astilboides), which is much smaller than *A. sylvester*, has also a more elegant pendulous habit, and is, therefore, better adapted for cutting; it is also an excellent plant for decorating the banks of streams and ponds, especially in shady or half-shady positions. Other good qualities are that it forces well, and is easily increased. The variety, ***Aruncus astilboides floribundus***, has still denser masses of white flowers, and is well deserving a place in our gardens. Closely allied to the genus Aruncus is the genus Astilbe, and so confusing is the botanical nomenclature that many varieties are known under the four different names of Aruncus, Astilbe, Hoteia and Spiræa.

ASTILBE SINENSIS has dark green leaves of considerable size, and bears large panicles of pink flowers. It is well adapted for forcing, and does well out-doors in a damp and shady position.

ASTILBE JAPONICA (syn. Spiræa japonica and Hoteia japonica), though perfectly hardy, is perhaps more grown indoors than in the open, on account of its forcing so exceedingly well, and its handsome plumes of white flowers in early spring are most valuable to the florist. Of considerable merit are also the varieties ***A. japonica foliis aureo reticulatis***, which has leaves veined with yellow, and ***A. japonica compacta multiflora***, which, as its name implies, is still more compact, and produces an abundance of white flowers for cutting. Two other forms of A. japonica coming from Holland, named "Washington" and "Gladstone," are strong growers, but otherwise not very different from the type. A bank of these was exhibited at the last Temple Show.

ASTILBE LEMOINEI (see Plate No. 6) is a garden hybrid, between ***A. Thunbergi*** and a variety of ***A. astilboides***. The flowers are of a very light feathery appearance, and are pinkish-white in colour.

ASTILBE RIVULARIS grows 3 feet high, and bears panicles of creamy white flowers. It is a grand plant for moist spots in the "wild garden," or for banks of ponds or streamlets.

ASTILBE THUNBERGI grows about 18 inches high, and bears in May or June erect panicles, consisting of small white flowers. Its native home is Japan, and like most plants from that country, it prefers a moist half-shady position.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

PLATE 6.

NEW VARIETIES OF "GOAT'S-BEARD."

1. ARUNCUS SYLVESTER VAR. KNEIFFII. 2. ASTILBE LEMOINEI.

Google

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

EARLY-FLOWERING ASTERS.

Aster alpinus L.

AND ITS VARIETIES.

Aster diplostephioides. *Benth. and Hook. f.*

AND

Aster peregrinus. *Pursh.*

(See Plate 7.)

The typical Alpine Aster, *Aster alpinus*, is very dwarf in its habit, growing only about 8 inches in height, and has bright purple flowers, about 1½ to 2 inches in diameter; it is, therefore, well adapted for a rockgarden or the front of a border, where its flowers are abundantly produced in May or June.

ASTER ALPINUS ALBUS (see Plate No. 7) has white flowers, and the variety known as *Aster alpinus ruber* has blossoms of a reddish purple shade. Both, however, are dwarf in growth, and though excellent for rockwork they cannot compare in usefulness for the purpose of cutting or for border decoration with the following:—

ASTER ALPINUS SPECIOSUS has showy flowerheads, 2½ to 3 inches in diameter, and of a rich purple colour, with orange disc. The plant grows about 12 inches high, and is in every way most desirable.

ASTER ALPINUS SUPERBUS (see Plate No. 7), also grows about a foot in height, but the flowers are not quite so large as those of the last-named variety.

ASTER DIPLOSTEPHIOIDES is also illustrated on Plate 7, and is a beautiful Perennial from the Himalayan Mountains; but being slow to increase from either seed or division it is still a rare plant. The flowers appear in July and August, and are 3 to 4 inches across, the ray-florets being purplish blue, and the discs dark purple or almost black. They are borne singly on stems about 18 inches high. As to soil, the plant prefers a deep well-drained loam.

ASTER PEREGRINUS is another most desirable species among the summer-flowering hardy Asters. (See Plate No. 7.) Its home is North America, and it flowers in May or June. The plant grows about 15 inches high. Its flowers resemble those of the Alpine Aster, but are larger. Not only is Aster peregrinus a good plant for spring or early summer bedding, but it is also well adapted for being grown in pots for gentle forcing.

In arranging these Asters in borders, rockgardens, &c., out of doors, they are most effective in masses, forming a dense carpet, and intermixed with earlier as well as later blooming other perennials to ensure a successive display of bloom.

Cultivation is simple enough, ordinary good loam soil being all that is required. Propagation by division or by seed sown in early spring.

Digitized by Google

Original from UNIVERSITY OF MICHIGAN

4

PLATE 7.

EARLY FLOWERING ASTERS.

1. ASTER ALPINUS ALBUS.
2. ASTER ALPINUS VAR. SUPERBUS.
3. ASTER DIPLOSTEPHIOIDES.
4. ASTER PEREGRINUS.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

LATE-FLOWERING ASTERS.

(*Michaelmas Daisies.*)

IN SOME OF THE BEST VARIETIES.

Aster amellus var. bessarabicus.

Aster Novæ-Angliæ

AND VARIETIES.

Aster Novi-Belgii,

&c.

(See Plate 8.)

"Michaelmas Daisies" must certainly be counted amongst the most useful plants in our gardens. Flowering, as they do, till late in the autumn, they fill up a gap when Dahlias and summer flowers have vanished. Some people despise the autumn Asters because some of the varieties are so robust in their growth that they rapidly encroach upon the ground reserved perhaps, for dwarfer kinds of plants. But, after all, it is only a matter of selection and arrangement. We have among these useful plants compact and dwarf varieties by the score, which for neatness and abundance of floral display would be difficult to replace by any other kind of plant. That among the tallest kinds there are some varieties which in time, if left to themselves, would spread so rapidly as to become a nuisance cannot be denied; but why plant these kinds in the flower garden at all? Their proper place would be the margin of a shrubbery, the wild garden, or any other place where their rapid growth cannot damage other plants.

Yearly the number of new hybrids increases, and there are now several hundred varieties under separate names. I will make no attempt to enumerate them all, but will simply give short descriptions of some of the best.

ASTER ACRIS, though not illustrated on the three coloured plates dealing with Asters, is one of the most useful of all and was handsomely illustrated in "The Garden" some time ago. The light blue flowers are distinguished at a glance from other Michalemas Daisies by their elegant drooping appearance. It grows only two feet high, is one of the handsomest flowers for cutting late in autumn, and is well worthy a place in the best of borders.

ASTER AMELLUS BESSARABICUS (see Fig. 3, Plate No. 8) flowers somewhat earlier than the last, and the illustration does not do justice to either the size of the flower or its brilliant colour. It grows about 18 inches to two feet in height, and flowers most abundantly and continuously from July or August till late in September.

ASTER NOVÆ-ANGLIÆ is illustrated on Plate No. 8 in two forms, of which the smaller flower, *Aster, Novæ-Angliæ var. ruber*, has a decidedly reddish tint. Useful as these Asters are for supplying cut blooms, they should only be used in borders of large size or margins of shrubs, as they attain a height of five feet, or even more.

ASTER NOVI-BELGII. This type, with its exceedingly numerous varieties grows from three to five feet in height, and must therefore be used only in the background of herbaceous borders. Plate No. 8 illustrates two of these varieties, namely, *Robert Parker*, with sprays of large lavender-blue flowers with yellow centre, which grows four or five feet high and flowers from September to November; and the variety *densus*, which grows only three to four feet in height and has smaller blue flowers, suitable for cutting.

More varieties of Aster Novi-Belgii, as well as other forms are illustrated on the next Plate (No. 9).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

PLATE 8

MICHAELMAS DAISIES.

1. ASTER NOVÆ-ANGLIÆ.
2. ASTER NOVÆ-ANGLIÆ VAR. RUBER.
3. ASTER AMELLUS BESSARABICUS
4. ASTER NOVI-BELGII VAR. DENSUS.
5. ASTER NOVI-BELGII "ROBERT PARKER."

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

Michaelmas Daisies

(Continued).

Aster Novi-Belgii L. var. candidissimus.

Aster cordifolius L. var. majus.

Aster grandiflorus L. and Aster Tradescantii.

(See Plate 9.)

The pure white forms of Aster Novi-Belgii, as illustrated on Plate No. 9, under the name of Aster Novi-Belgii candidissimus, are most desirable for cutting as they are without that pale lilac shade so often shown by so-called White Asters. Of other Asters of the *Novi-Belgii* type, which are not here illustrated, must be mentioned "Archer Hind," which has an erect habit, grows four feet high, and bears soft blue flowers; *Formosissimus*, with rosy lilac blossoms; "Purity," four feet high, with pure white flowers; and "White Queen," also with white flowers of bold habit.

ASTER CORDIFOLIUS and the variety A. C. MAJOR, are also illustrated on Plate No. 9. Both bloom from September to November. The flowers are lilac in colour and of very elegant form, which makes them most useful as cut flowers. The height is about four feet. The variety known as *Aster cordifolius* "Photograph" has also lilac or lavender coloured flowers, borne in elegant sprays on stems about three or three-and-a-half feet high.

ASTER COOMBE FISHACRE though not illustrated is a most desirable form, growing three-and-a-half feet high, with flesh coloured flowers.

ASTER TRADESCANTII (see Plate No. 9) bears lovely sprays of white flowers, most useful to the florists, who also use the exceedingly small-leaved foliage, which is elegant in form and bright green in colour. The illustration gives a fair idea of both flowers and foliage. In Continental nurseries this variety is sometimes found under the now obsolete name of *Aster Datchii.*

ASTER GRANDIFLORUS (Plate No. 9) is one of the latest of Michaelmas Daisies, and being also one of the handsomest it is well worthy of having its flowering season prolonged by being lifted from the ground and put into a conservatory, where its handsome violet-blue flowers will continue to bloom till Christmas. It grows three feet high, and the flowers are generally larger than shown in the illustration.

ASTER LINOSYRIS is not illustrated but should certainly be in every collection of herbaceous plants. It has terminal corymbs of bright golden yellow flowers (hence its popular name, Goldylocks), and grows about fifteen to eighteen inches in height. The plant is also known under the synonyms of *Chrysocoma Linosyris*, or *Linosyris vulgaris*.

Out of the host of other Asters not illustrated in this work I will only mention the following:—

ASTER DUMOSUS forms an exceedingly dwarf and compact bush little more than a foot in height and about the same in diameter. It is a suitable plant for the front row of a border and its bright purple flowers last till October.

ASTER ERICOIDES, as the name implies, much resembles a heath in the habit of the flowers, which are very small, pure white, and are borne in long elegant sprays on stems about three feet high.

ASTER PTARMICOIDES grows about eighteen inches high, is of neat habit, and bears pure white flowers, which begin to appear in August lasting till late in the autumn.

ASTER PURPURRIMUS is also very neat and compact, bearing bright rosy purple flowers and growing about a foot in height.

ASTER TRINERVUS grows three feet high and has handsome blue flowers, but is not very hardy.

ASTER VIMINEUS has very small white star-shaped flowers in very elegant sprays, and grows two-and-a-half to three feet high.

Digitized by Google

Original from UNIVERSITY OF MICHIGAN

PLATE 9.

MICHAELMAS DAISIES II.

1 AND 2. ASTER NOVI-BELGII VAR. CANDIDISSIMUS.

3. ASTER CORDIFOLIUS.

4. ASTER CORDIFOLIUS VAR. MAJOR.

5. ASTER GRANDIFLORUS.

6. ASTER TRADESCANTII.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

THE BEST HAREBELLS.

Campanula persicifolia L. var. grandiflora, var. alba, var. alba fl. pl., var. coronata and Campanula latiloba.

(*See Plate 10*).

Of the numerous Harebells, or Bell-flowers, this limited work can, of course, deal only with the best perennial forms of the bolder type, and the exquisite mountain Harebells of the dwarfer kind cannot be mentioned here, as they are more suitable for a rock garden than for cutting.

CAMPANULA PERSICIFOLIA GRANDIFLORA (see Plate No. 10) is a great improvement on the old peach-leaved Campanula, which is found wild in various parts of Europe. By garden culture it has now become a truly noble Perennial; the flowering season is June and July. Its light blue flowers are fully two inches across, and it attains a height of about two feet. Few plants are more handsome for the border. Especially striking is Backhouse's grand white form, now well known as *Campanula persicifolia grandiflora alba*. This also is illustrated on Plate No. 10, but the picture gives but a faint idea of this grand flower. In Great Britain the pure white flowers are larger and much more numerous than would be inferred from the plate. A rare and handsome kind is the double form (Plate No. 10.), which is more compact in its growth, and the same Plate also illustrates the "cup and saucer" form, known as *var. coronata* and *Campanula latiloba* (a native of Greece), with broad blue petals, of which there also exists a white form. It grows two-and-a-half to three feet high.

I will now mention a few Campanulas not illustrated by the coloured plates.

CAMPANULA GLOMERATA DAHURICA, a dwarf but very free-flowering form, with terminal clusters of deep purplish blue flowers on stems twelve to eighteen inches long. It is well suited for cutting, and on account of its dwarf habit forms an excellent plant for the front of a border, or even the bolder parts of rockwork. There is also a white form.

CAMPANULA GRANDIS is an erect growing variety, flowering in June and July; it has large blue flowers on stems about three feet high. Most useful, especially for cutting; is also the white kind know as *Campanula grandis alba*.

CAMPANULA HENDERSONI grows about eighteen inches high, and has large deep blue flowers with a rather flat corolla.

CAMPANULA LATIFOLIA, and its white form, Campanula latifolia alba, though useful for cutting, are more suitable for a "wild garden" than for the flower-garden proper. They grow three to four feet in height, and form striking plants.

CAMPANULA LATIFOLIA MACRANTHA is only a hybrid form of Campanula latifolia, with purplish blue flowers rather larger than the type.

CAMPANULA LACTIFLORA is generally white but assumes sometimes a decidedly blueish tint. It is a tall growing species suited for the back of the border or margin of shrubbery. Its native home is in the Caucasus, and it is also known as *Campanula celtidifolia*.

CAMPANULA MEDIUM. The "Canterbury Bell" and its improved form *C. m. calycanthema*, are too well known to need description. Unfortunately it is only biennial, and the same may be said of the tall chimney Campanula, *C. pyramidalis* which is best raised from seed.

CAMPANULA MIRABILIS is a new species growing about 12 inches high and bearing on stout woody stems a profusion of large pale blue flowers.

CAMPANULA PERSICIFOLIA MOERHEIMI is a grand new variety of sturdy habit and bearing rose-shaped pure white double flowers.

CAMPANULA RHOMBOIDALIS is a very free-flowering kind with blue flowers. Still better than this type is Campanula rhomboidalis alba, with an abundance of pure white flowers about fifteen inches high.

CAMPANULA URTICIFOLIA ALBA PLENA is a bold perennial with handsome double white flowers about three feet high. Like the typical blue form it is well suited for a moist and shady spot in the shrubbery or border.

CAMPANULA VAN HOUTTEI is a choice border plant about two feet high, bearing comparatively very long tubular blue flowers of striking appearance.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

PLATE 10.

HAREBELLS

1. CAMPANULA PERSICIFOLIA VAR. GRANDIFLORA.
2. CAMPANULA PERSICIFOL. GRANDIFL. ALBA (Backhouse.)
3. CAMPANULA PERSICIFOLIA GRANDIFL. ALBA FL. PL.
4. CAMPANULA PERSICIFOLIA ALBA CORONATA.
5. CAMPANULA LATILOBA.

Digitized by Google
UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

Centaurea Montana L.

AND VARIETIES.

(See Plate 11.)

CENTAUREA MONTANA, the "Mountain Knapweed," is a native of Asia Minor, where it frequently appears among limestone rocks and on mountain meadows with calcareous subsoil. Since its cultivation in our gardens it has been greatly improved, the flowers having become larger and handsomer than in the typical form. It has also proved a useful plant for hybridisation, and besides the original blue we have now quite a variety of colours (see No. 1, Plate 11).

CENTAUREA MONTANA ALBA is a fine white form bearing its large flowers on semi-prostrate branches about eighteen inches to two feet in length (see No. 2, Plate 11). If planted in the border the shoots should be carefully tied up as the plant is rather straggling in its habit. This tying up, if a stiff and unnatural appearance is to be avoided, has to be done with great care, as pointed out in my remarks under the heading of "Cultivation" in the Introduction in the first part of this work. The leaves of this and other forms of Centaurea montana are sessile, of lanceolate shape, and woolly underneath.

CENTAUREA MONTANA ROSEA is perhaps the handsomest of the Mountain Knapweeds, its long stems make it particularly well adapted for cutting, and its delicate pink colour is pretty (see No. 3, Plate 11).

CENTAUREA MONTANA SULPHUREA, as the name implies, is sulphur-yellow in colour, and is also illustrated on Plate No. 11.

On the Continent Centaurea montana and its varieties are frequently forced in order to obtain an earlier supply of flowers for the market. Its natural time for flowering out of doors is May and June.

Although in its native home this flower is found mostly on calcareous soil. It does well in our gardens in almost any soil, and is easily increased by division.

Centaurea montana is admirably adapted for the rock garden, especially in the higher and bolder parts of rockwork, where the pendant shoots can hang down over large stones.

Other Centaureas are depicted on the next Plate, No. 12.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

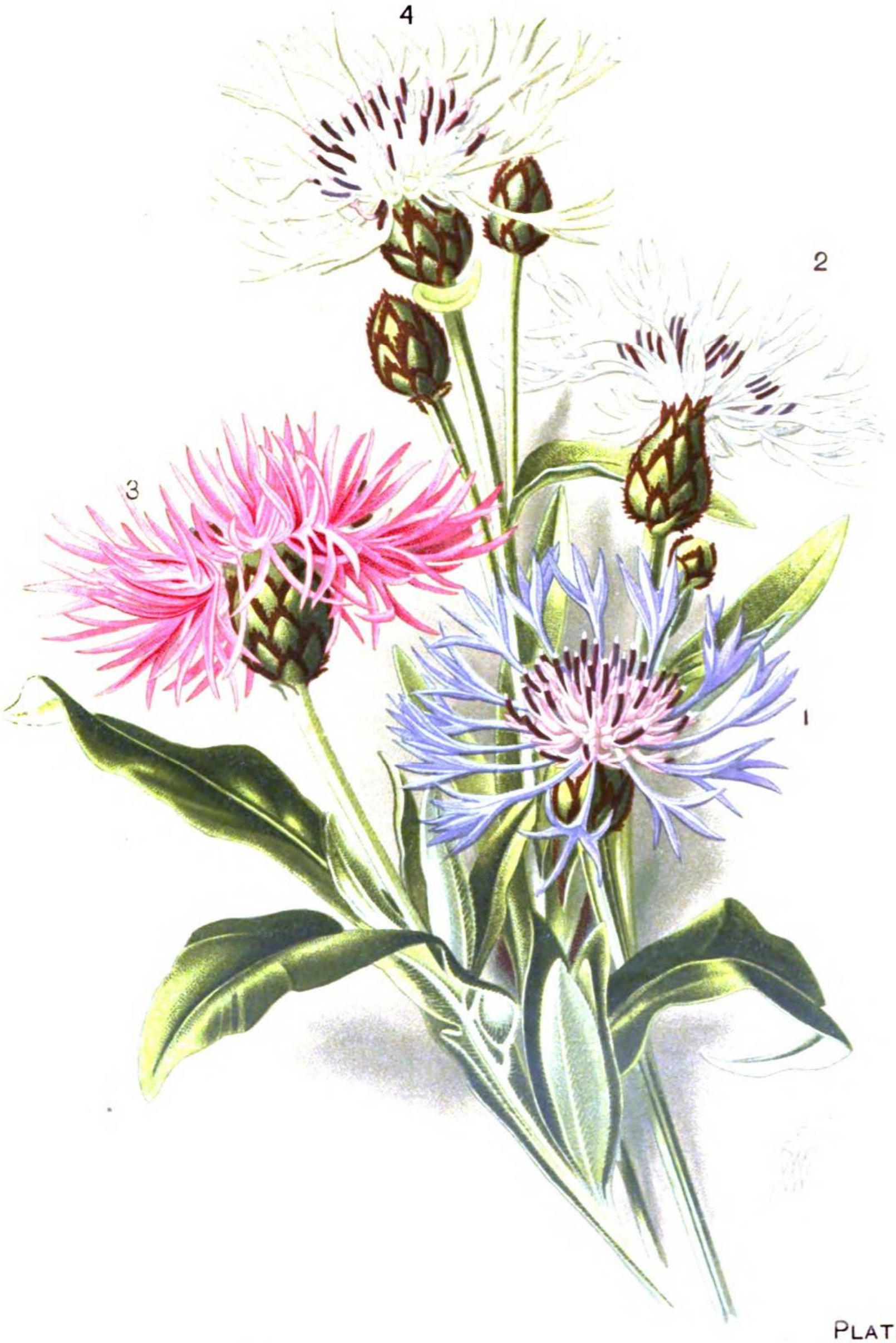

PLATE 11

MOUNTAIN KNAPWEEDS.

1. CENTAUREA MONTANA.
2. CENTAUREA MONTANA ALBA.
3. CENTAUREA MONTANA ROSEA.
4. CENTAUREA MONTANA SULPHUREA.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

Centaurea dealbata *Wild.*

AND

Centaurea ruthenica *Lam.*

(*See Plate 12.*)

The forms here illustrated differ considerably from the type of Centaurea montana, depicted on the last Plate.

CENTAUREA DEALBATA grows about eighteen inches high, and is a native of the Caucasus and Northern Persia. It blooms from June to August and its flowerheads are bright pink with a whitish centre. The leaves are pinnate, and are covered with white hairs on the under surface (see No. 1, Plate 12).

CENTAUREA RUTHENICA is also a native of the Caucasus. It is much taller than the last named, growing nearly three feet in height, and its very long wiry stems make it a particularly desirable plant for cutting. The flowers are of a pale yellow colour, which in this country is not quite as deep as on the illustration (Plate No. 12). The leaves are smooth and pinnated. The flowering time is May and June.

Of Centaureas not illustrated in this work the following must be mentioned:—

CENTAUREA MACROCEPHALA with enormous flowerheads of a very deep golden yellow colour. The leaves, too, are large, ovate-lanceolate in shape and over eighteen inches in length. The plant is very effective, and in grouping may with advantage be used as a single specimen on either lawn or border.

CENTAUREA GLASTIFOLIA is a very tall growing species with deep yellow, handsome flowers, but the plant is somewhat straggling and untidy in appearance.

There are many other Centaureas, but they cannot vie with those already described.

Another genus of plants, however, should be mentioned here, which although not illustrated must, nevertheless, rank amongst first-class Perennials, namely,

Chelone.

Most varieties of Chelone love a somewhat moist position, and have handsome flowers appearing, moreover, towards the latter part of the summer and early autumn when showy flowers, either for cutting or for garden adornment, are all the more welcome.

CHELONE BARBATA is now more generally called *Pentstemon barbatus*, under which name it has been dealt with in this work.

CHELONE GLABRA has creamy white flowers appearing in terminal clusters, and grows two to three feet high, doing exceedingly well in a moist and shady place.

CHELONE LYONI is about two-and-a-half feet high, and bears from July to September terminal clusters of pink flowers. It is a most useful Perennial in every way.

CHELONE OBLIQUA is taller than the last, grows about three feet in height, and the flowers are of a rich purple shade. This plant is also known under the synonym of ***Chelone purpurea***

Digitized by Google

Original from UNIVERSITY OF MICHIGAN

PLATE 12.

KNAPWEEDS.

1 CENTAUREA DEALBATA.

2. CENTAUREA RUTHENICA.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Chrysanthemum maximum. *Ram.*

(See Plate 13.)

"Marguerites" have at all times been favourite flowers for cutting and for decorative purposes. Many annuals, and especially, too, the so-called "Paris Daisies" (Chrysanthemum frutescens), are always in great demand. It is, however, only in very mild and sheltered districts that the latter will succeed out of doors, and it can, therefore, not be classed among Hardy Perennials. The finest really Hardy Perennial Marguerites are undoubtedly those shown on coloured Plate, No. 13.

CHRYSANTHEMUM MAXIMUM is a native of the Pyrenees. It forms a bush two-and-a-half feet high, and during July and August it is covered with such an abundance of large and handsome white flowers that the foliage is scarcely visible.

Some years ago the much inferior *Chrysanthemum latifolium* was often erroneously called C. maximum, but the difference between the two is very marked. C. latifolium grows much taller and bushier, has much smaller flowers, and spreads so rapidly as to become a nuisance in a flower border, and is, therefore, best relegated to a rough bare place among shrubs, where it can spread out as it pleases.

CHRYSANTHEMUM MAXIMUM has none of this wild straggling habit, but its appearance is most neat and compact. The white flowers are four inches or more in diameter. The leaves are lanceolate with a dentate margin.

By crossing quite a number of hybrids have been obtained, some of them no better than the type, while others are certainly an improvement, and of these just a few might briefly be mentioned.

CHRYSANTHEMUM MAXIMUM FILIFERUM is distinguished by having the petals of its ray-florets much divided.

CHRYSANTHEMUM MAXIMUM GRANDIFLORUM is a larger flower, and is also more vigorous in its growth.

CHRYSANTHEMUM MAXIMUM "G. H. SAGE" has large pure white flowers with a distinct notch in each petal.

CHRYSANTHEMUM MAXIMUM, "M. PRICHARD," and C. M. "TRIUMPH" must also be mentioned as possessing special merit, chiefly on account of the petals which are longer and broader than in the type.

Cultivation is simplicity itself as the plants will thrive almost anywhere, but prefer plenty of moisture. Propagation is best effected by division.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

PLATE 13.

CHRYSANTHEMUM MAXIMUM,

IN VARIOUS FORMS.

Digitized by Google
Original from
UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

Chrysanthemum uliginosum. *Pers.*

(*Synonym* Pyrethrum uliginosum. *Waldst. & Kit.*)

(*See Plate 14.*)

CHRYSANTHEMUM ULIGINOSUM is perhaps more generally known as *Pyrethrum uliginosum*, and is one of our stateliest autumn bloomers. The coloured plate was prepared from flowers grown on the continent, but in Great Britain, and especially in the West of England, the size of the flowers would be nearly double that shown by the illustration. It is a native of South-eastern Europe, and its name implies its love for a damp situation. The plant, however, does not appear to be very particular in this respect as very fine specimens may be seen growing in comparatively dry soil.

For the background of a border where late flowering plants are desired Chrysanthemum uliginosum is the very thing. It often grows over six feet in height. The flowers, which bloom during September and October, are large, pure white, and most useful for cutting, while the rigid stems and general neat appearance of the plant constitute quite an ornamental feature. The plant is so well known as to need no further description.

Of other forms of hardy perennial Chrysanthemums which are not illustrated in this work I will mention a few of the best:—

CHRYSANTHEMUM LEUCANTHEMUM SEMI-DUPLEX is a flower most useful for cutting, if grown in a space set aside for the purpose, but as an ornament in the flower garden it is not worth planting, on account of its very straggling and untidy appearance. It grows two feet or more in height, and has, as the name implies, semi-double white flowers, blooming in July and August.

CHRYSANTHEMUM INODORUM PLENISSIMUM is perhaps better known as *Matricaria inodora, fl. pl.*, and is a very compact double form of the native British weed. Though an excellent flower for cutting it is too straggling in its style of growth to be associated with plants in a flower garden where neatness is desirable.

CHRYSANTHEMUM NIPPONICUM is a Chinese species distinguished by its shrubby growth. It grows eighteen inches to two feet high, and is covered late in summer and during the early autumn with an abundance of white flowers about three inches across. The leaves are dark green and glossy, of leathery appearance, oblong-spathulate in shape, three to four inches long, with margins irregularly toothed.

CHRYSANTHEMUM ZAWADSKII is a native of Galicia, and has exceedingly handsome, large, single white flowers tinted with delicate pink. It grows only twelve inches or so in height, and its branches are somewhat procumbent. It is well adapted for the front part of a border or for rockwork.

An important genus of plants is

Coreopsis.

Among late summer flowers of yellow colour few are more adapted for cutting than the various kinds of Coreopsis, which, on account of their long wiry stems are especially well fitted for that purpose.

COREOPSIS AURICULATA has small flowers which are produced in great abundance from June to September.

COREOPSIS LANCEOLATA is perhaps the best known. It grows about two feet high and flowers abundantly.

COREOPSIS GRANDIFLORA grows three feet high, and has large flowers of a bright golden yellow three inches across; it is a grand flower for cutting but seldom lasts more than two or three years. This is illustrated on Plate 26 in conjunction with Helianthus rigidus.

COREOPSIS SENIFOLIA is a rare species growing four feet high, and flowering till autumn.

COREOPSIS VERTICILLATA grows two feet high and has a very slender style of growth.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

PLATE 14.

CHRYSANTHEMUM (*syn* PYRETHRUM) ULIGINOSUM.

Digitized by Google Original from UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

Delphinium sinense grandiflorum.

Delphinium nudicaule. *Torr. & Gr.*

Delphinium Zalil *Aitch & Hemsl.*

(*Syn.* D. SULPHUREUM. *Hort.*)

(*See Plate 15.*)

The Perennial Larkspurs are particularly striking for bold effects of colour, especially if planted in masses in our gardens.

DELPHINIUM GRANDIFLORUM L. is a very rare and most distinct species. It is not illustrated in this work, but in the Continental edition in which the coloured plates first appeared it is confounded with *Delphinium sinense grandiflorum* from which, however, it is quite distinct. The true *Delphinium grandiflorum, L.* grows about 2 feet high. It has ebony-black stems and dark-green foliage. The flowers are perfect in shape, very large, double, and of an intensely brilliant blue colour. It is a native of Siberia.

DELPHINIUM NUDICAULE, which is also illustrated on Plate No. 15, is a native of California and is seldom more than twelve or eighteen inches high. The scarlet flowers are very showy, and appear in June and July. The leaves are tripartite and have notched lobes. Though a true perennial it is very liable to damp off in wet ground, but on raised ground, in light soil, it will live for years. It is well suited for the front part of a border or for a well drained position in a rock garden.

DELPHINIUM SINENSE GRANDIFLORUM occurs in many forms, one of which is illustrated by Fig. 1, Plate 15. It is more fully described in connection with Plate 17, where various other forms of the Chinese Larkspur are depicted.

DELPHINIUM ZALIL, which is also known under the name of *D. hybridum sulphureum*, has, as shown on the coloured Plate, No. 15, beautiful sulphur-yellow flowers. It attains a height of four to five feet, and is a native of Afganistan. On the continent it is frequently grown in masses, which are most effective. But, unfortunately, the humid climate of Great Britain does not seem to suit it nearly as well as the drier continental climate. Though a true perennial it is described as an Annual in some English books, owing, no doubt, to the fact that it was killed during the first winter by excessive moisture, against which it is most susceptible. In dry sandy soil, however, it thrives very well, especially on raised beds or borders. Propagation is best effected by seeds. The seedlings do not flower till the second year.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

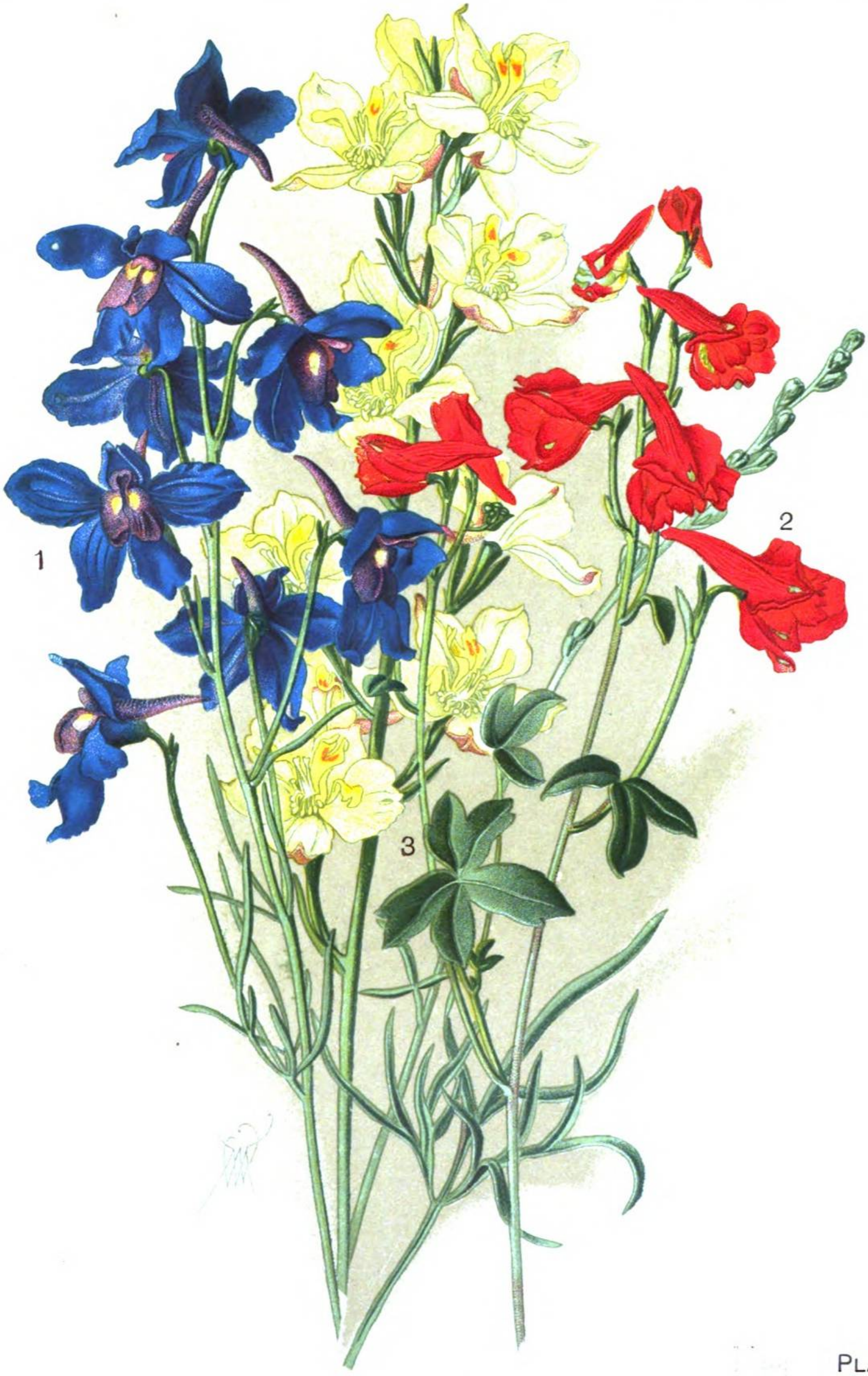

PLATE 15.

LARKSPURS I.

1. DELPHINIUM SINENSE GRANDIFLORUM. 2. DELPHINIUM NUDICAULE.
3. DELPHINIUM ZALIL (*syn.* SULPHUREUM).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

Delphinium hybridum. *Hort.*

AND OTHER LARKSPURS IN SINGLE AND DOUBLE FORMS.

(*See Plate 16.*)

The Hybrid Larkspurs are among the most stately representatives of Hardy Perennials. The illustrations here given show, of course, only portions of flowers, but many varieties produce flower spikes "by the yard," and when grouped together in bold masses in either borders or among shrubs they are highly effective. As cut flowers, too, for filling large vases, &c., the Hybrid Larkspurs furnish an excellent material in many different shades of colour.

On the coloured Plate No. 16 single forms are represented by illustrations, Nos. 1 and 2, and by the variety "*Belladonna*," shown as No. 7. Of the latter the colour is fairly accurately reproduced, but its full beauty of form cannot be depicted by only a small portion of the flower spike. *Delphinium hybridum* "*Belladonna*" is probably a cross between D. formosum and D. sinense. It is, as a rule, less than a yard in height, and is much branched in its growth, while most other Hybrid Delphiniums grow erect and attain a height varying from four to five or even six feet.

Nearly every raiser of Hybrid Delphiniums gives distinctive names to his productions, with the result that we have hundreds of names for single and double Delphiniums.

Unless special varieties are desired the best results are generally obtained by mixed seedlings. The Seeds are best sown in March or April into pots or boxes put into a cold frame, and the young plants should be transplanted in May or June; or, if desirable, the seed can be sown in the open ground, say in April.

Every three or four years the clumps of Larkspur should be lifted and divided, an operation which is best performed during spring. A well manured loam seems to suit them best.

The coloured Plate No. 16 also shows a peculiar double form of the Chinese Larkspur, which has erect double flowers without spurs. This has been named *D. sinense flore pleno erecto* (see Fig. 8, Plate No. 16).

Other forms of *Delphinium sinense* are depicted on the next coloured plate, No. 17.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

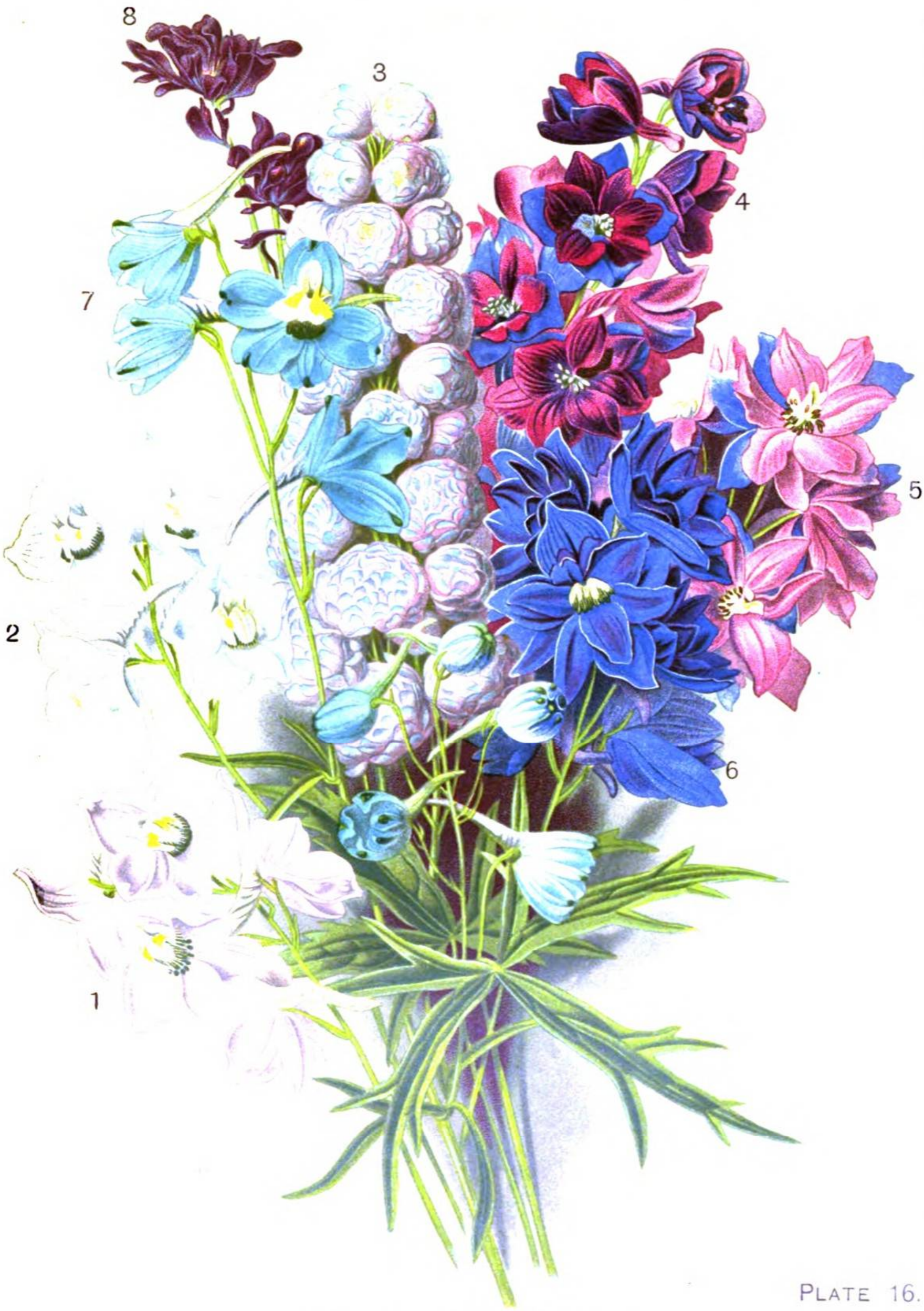

PLATE 16.

HYBRID LARKSPURS II.

1 AND 2. DELPHINIUM HYBRIDUM (single forms).

3 TO 6. DELPHINIUM HYBRIDUM (double forms).

7. DELPHINIUM HYBRIDUM "BELLADONNA."

8. DELPHINIUM SINENSE FLORE ERECTO.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

CHINESE LARKSPURS.

Delphinium sinense *(Fischer)* var. grandiflorum.

(*See Plate 17.*)

It has already been pointed out that this variety is quite distinct from *Delphinium grandiflorum L.*, which is a native of Siberia.

The coloured Plate, No. 17, shows various shades of the large flowering China Larkspur *Delphinium sinense grandiflorum*. The plants grow from one to two feet high, and are compact in their habit, while their colours range through all shades of blue and violet. Very fine is the single white form. The double kinds are less attractive.

The Chinese Larkspurs flower from May to July, and the seedlings raised in early spring will flower in August or September of the same year.

I will now briefly mention a few other forms of Perennial Delphinium not depicted by coloured plates.

DELPHINIUM BRUNONIANUM comes from Thibet and is a rare plant growing about twelve inches high. It has slate-blue flowers with a dark centre, and emits a very distinct perfume of musk.

DELPHINIUM CASHMERIANUM has pale blue flowers and grows about eighteen inches high. It comes from Cashmere, as the name implies, and flowers in July. The individual flowers are about one-and-a-half to two inches across and have broad sepals. The palmate leaves are deeply lobed.

DELPHINIUM CARDINALE is a showy Californian flower growing three feet high, but as a rule it is short lived, being very liable to damp off.

DELPHINIUM FORMOSUM is one of the most useful of border plants. The flowers are very deep blue, and have a long spur shaded with violet. The leaves are palmate and somewhat greyish in appearance. The plant grows about two-and-a-half to three feet high and is easily increased from seed.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

PLATE 17.

CHINESE LARKSPUR III.

DELPHINIUM SINENSE VAR. GRANDIFLORUM (in 5 different colours).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

Doronicum caucasicum. *Bieb.*

AND

Doronicum plantagineum L. var. excelsum. *N. E. Br.*

(*See Plate 18.*)

The various kinds of *Doronicum*, or "Leopard's Bane," are among our earliest spring flowers, unfolding their bright golden yellow blossoms often as early as March or April. As their stems are long and their flowers substantial they are particularly well suited for cutting, and if put into water before packing they travel well and retain their freshness. If gently forced they bloom much earlier, and are, therefore, essentially florists' flowers. But in the garden, too, they may be used with great advantage for quite a variety of purposes. In flower beds or borders they are exceedingly effective associated with early bulbs and other spring flowers. In the margins of shrubberies masses of Doronicum irregularly grouped, and even dispersed here and there over the adjoining lawn, form a striking feature, and even in the bolder parts of a rock garden they may be used to advantage.

DORONICUM CAUCASICUM depicted on Plate No. 18 comes from the Caucasus, as the name implies, and grows only twelve to eighteen inches high. The numerous flower heads are composed of golden yellow ray-florets and orange disc-florets. The cauline leaves are ovate with a broad base, while the radical leaves are reniform and deeply toothed.

DORONICUM PLANTAGINEUM EXCELSUM, which is represented by the larger illustration on Plate No. 18, is also known under the synonyms of *Doronicum Harpur Crewe* and *Doronicum magnificum*. It grows two-and-a-half to three-and-a-half feet high, and bears in March or early April grand yellow flowers four inches across and most suitable for cutting. Often a second lot of flowers appears late in summer. The cauline leaves are amplexicaul cordate-ovate and coarsely dentated. The radical leaves have long petioles and are hairy. It is in every way a great improvement on the original form of *Doronicum plantagineum L.*, which is much smaller.

Other varieties of Doronicum worth mentioning but not illustrated are:—

DORONICUM AUSTRIACUM, which grows about eighteen inches high and has large golden yellow flowers measuring about three inches in diameter. The cauline leaves are dentate, amplexicaul, while the radical leaves are petiolate and cordate in shape.

DORONICUM CLUSII, or as it is sometimes called, *Arnica Clusii*, is seldom more than eighteen inches or two feet high, and is a native of Switzerland. As in other species, the flowers are golden yellow and are suitable for cutting. The stem is covered with rather long hairs. The cauline leaves are sessile, semi-amplexicaul, lanceolate with dentate margin. The radical leaves are oblong, entire, and petiolate.

Digitized by Google

Original from UNIVERSITY OF MICHIGAN

PLATE 18.

LEOPARD'S BANE.

1. DORONICUM CAUCASICUM. 2. DORONICUM PLANTAGINEUM EXCELSUM (Harpur Crewe).

Digitized by Google
UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

Echinacea angustifolia *D.C.*

AND

Echinacea purpurea. *Much.*

(*Syn.* RUDBECKIA PURPUREA L.)

(*See Plate 19.*)

So little is the difference between the generic characters of Echinacea and Rudbeckia that some botanists have described these plants as *Rudbeckia*. According to the latest authorities, however, the name *Echinacea* should stand as being more correct.

ECHINACEA ANGUSTIFOLIA (Plate No. 19) has its home in the United States of America and is a decidedly handsome Perennial. It grows three to four feet high and flowers late in summer or autumn. The disc-florets form a large purplish brown cone similar to those seen in the genus *Rudbeckia*, but the great charm of the flower consists in its ray-florets, which have very long petals of a most pleasing purplish rose colour deeply notched at the points, and drooping somewhat after the manner of a Japanese Chrysanthemum. Some flowers develop petals four or five inches in length. The leaves are distinguished from those of other varieties of Echinacea by their comparative narrowness, being about six inches long and not much more than an inch wide. Echinacea angustifolia is a "good all round" Perennial, being well suited for cutting and equally well adapted for bold and effective grouping in borders, &c.

ECHINACEA PURPUREA, better known by the older name of *Rudbeckia purpurea*, is also of American origin. It grows a little more vigorously than the last named species, attaining a height of four feet, and the coloured Plate, No. 19, gives a good idea of the difference between *E. purpurea* and *E. angustifolia*. It will be seen by comparing the illustrations that Echinacea purpurea has the petals of its ray-florets much shorter, broader, less drooping, and generally much stiffer than those of Echinacea angustifolia. The colour of the flowers is a pleasing purplish rose, and the flowering season lasts from August to October. The flower stem is very long and rigid. The leaves are much larger and broader than those of Echinacea angustifolia. They are six to nine inches long and two-and-a-half or three inches wide, and lanceolate in shape; generally the flowers are much larger than shown on the coloured plate.

By crossing *Echinacea purpurea* with *Echinacea angustifolia*, and also with yellow flowering *Rudbeckias*, a number of hybrids have been raised for which it is claimed that they surpass the original forms. In this country, however, they have as yet not been tried sufficiently to judge of their merits.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

PLATE 19.

1. ECHINACEA (*syn.* RUDBECKIA) ANGUSTIFOLIA.

2. ECHINACEA (*syn.* RUDBECKIA) PURPUREA.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

GLOBE THISTLES.

Echinops ruthenicus

Echinops hybridus

AND

Echinops Ritro.

(See Plate 20.)

The "Globe Thistles" are Hardy Perennials of the boldest character. Their large gobular flower heads, on long and rigid stems, combined with the handsome leaves, which somewhat remind one of *Acanthus*, form quite a picturesque object, and in the cut state are a boon to those who have developed the fashionable taste of filling large vases and other receptacles for decoration with one kind of flower only.

For small gardens other flowers may be preferable, but for bold effects in grouping plants among borders or shrubberies of any size, the Globe Thistles are most striking objects, both on account of their bold appearance and the soft blue colour of their flowers. Their flowering season is from July to September.

ECHINOPS RUTHENICUS (Fig. 1, Plate No. 20) is one of the best. It grows about four feet high, and has flowers of a slightly darker shade of blue than the illustration. Its home is Eastern Europe and Western Asia. The globular flower-heads have a diameter of about two-and-a-half inches. The alternate leathery leaves are pinnatifid, dentate, and spiny, covered with whitish down on the under side.

ECHINOPS HYBRIDUS occurs in various forms produced through crossing blue and white flowering kinds. The illustration (Fig. 2, Plate No. 20) shows a variety with pale blue flowers.

ECHINOPS RITRO (Fig. 3, Plate No. 20) has its blue flowers tinged with violet. This is a native of Southern Europe, and grows about four feet high. The leaves are divided into lobes, not terminating in a spine as in some other kinds.

Not illustrated but worthy of mentioning are:—

ECHINOPS BANATICUS (*Roch*) with pale blue flowers and growing to a height of six feet.

ECHINOPS SPHÆROCEPHALUS L. bears bluish white flowers and grows from four to six feet high. The leaves are spinose and are covered with a grey felt-like pubescence on the under side.

ECHINOPS COMMUTATUS, or as it is called by some botanists *E. exaltatus*, is perhaps the tallest of all, growing six to seven feet high and bearing whitish flowers. It is a native of Austria.

Digitized by Google

Original from UNIVERSITY OF MICHIGAN

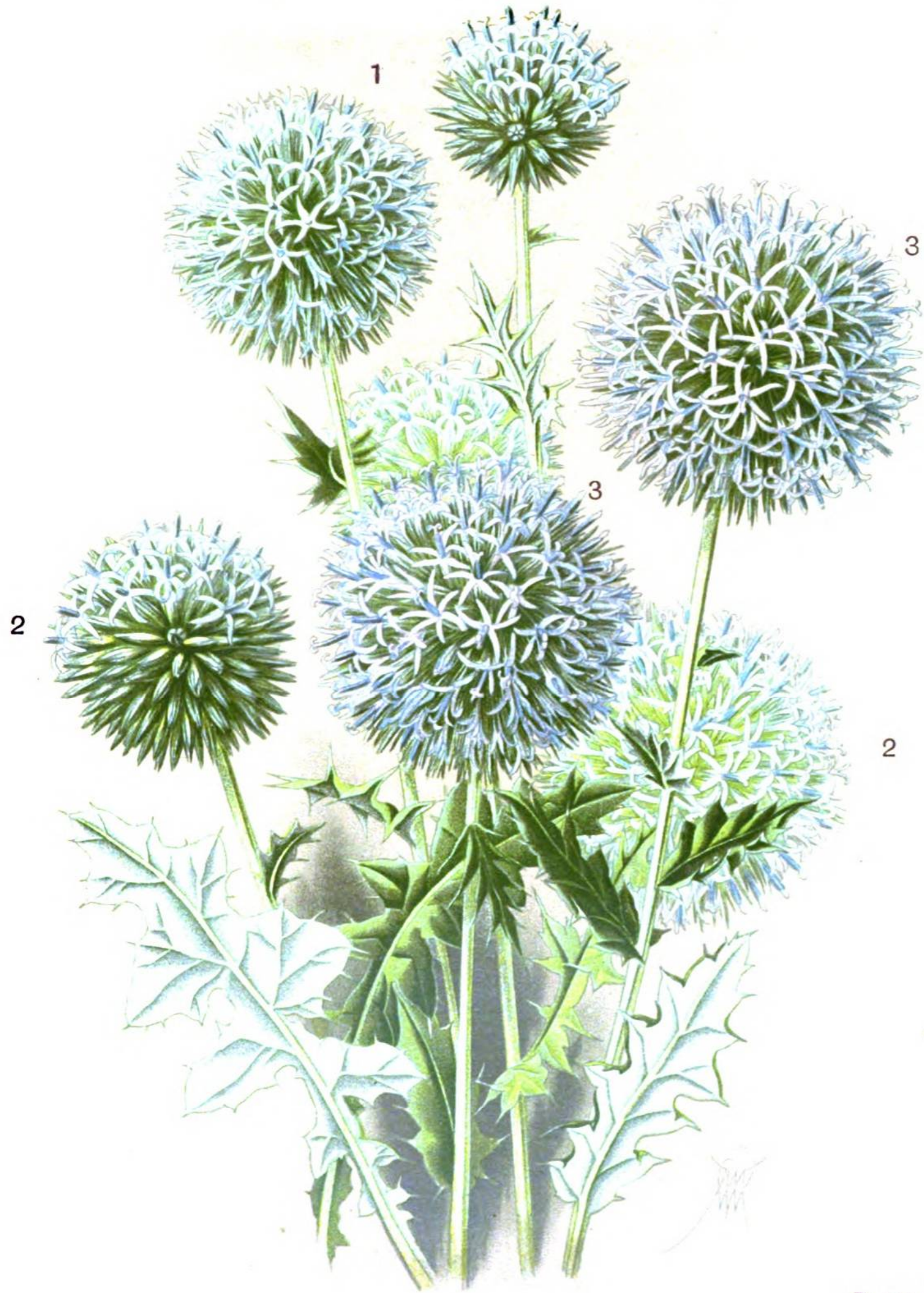

PLATE 20.

GLOBE THISTLES.

1. ECHINOPS RUTHENICUS. 2. ECHINOPS HYBRIDUS. 3. ECHINOPS RITRO.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

Erigeron aurantiacus. *Regel.*

Erigeron Coulteri. *Port. & Coult.*

Erigeron speciosus D. C. var. superbus.

(See Plate 21.)

"Fleabane" is the unattractive English name given to the pretty and somewhat extensive genus of Erigeron. This class of plants contains a great many varieties which are very distinct, both with regard to size and colour. The larger kinds are excellent border plants, and useful for cutting, while among the dwarfer kinds there are many excellent forms suitable for the rock garden.

Propagation might be effected by seed in spring or summer, or by division in autumn or spring. They will grow in almost any soil, and prefer a sunny position to a shady one.

ERIGERON AURANTIACUS is the dwarfest of the three forms illustrated on Plate No. 21. It grows only nine to twelve inches high, and is a native of the mountains of Turkestan. The solitary flowers are of a deep orange colour, about two inches across, and are borne on stout erect stems. The leaves are sessile and lanceolate in shape. Though a Perennial *E. aurantiacus* is apt to die during the second or third year unless planted in a well drained position. The front of a border or an elevated position on rockwork suit its requirements.

ERIGERON COULTERI, represented by the second illustration on Plate No. 21, is of comparatively recent introduction, and is one of the many good things sent from Colorado by Mr. C. A. Purpus. Its flowers are white, with yellow disc, and are very light and elegant in appearance, being disposed in loose corymbs borne on stems about eighteen inches high. It is a good flower for cutting and blooms in June and July.

ERIGERON SPECIOSUS VAR. SUPERBUS is also illustrated on Plate No. 3, but the illustration was prepared from a small pot-grown specimen which does not do justice to the flower, which, in England at all events, attains double the size here depicted. Erigeron speciosus superbus is larger than the original *E. speciosus*, perhaps more widely known as *Stenactis speciosa*. It blooms in June and July, and grows nearly three feet high, forming a compact bush smothered with large flowers varying in shade from pale lilac to violet.

Forms of Erigeron not illustrated but well worth mentioning are:—

ERIGERON GLAUCUS, about twelve inches high, and a native of Western North America. It has pretty purple flowers two inches or so across and ciliated glaucous leaves. The flowering season is from July to September. For the front of a border, or any other position where a carpet of dwarf plants is desired E. glaucus would be useful, especially if grouped in a mass and intermixed with other plants flowering at a different time of the season.

ERIGERON GLABELLUS also has pale purple flowers with yellow disc. It is a native of the United States, and flowers in June and July. The stems are somewhat prostrate, which makes the plant more suitable for rockwork than for the border.

ERIGERON MUCRONATUS, or as it also called, *Vittadenia triloba*, is a dwarf species with daisy-like flowers, unsuitable for cutting but well suited for rockwork. It comes from Mexico and is not hardy in the North of England.

ERIGERON PHILADELPHICUS has rosy pink flowers, grows eighteen inches or more in height, and is well adapted for cutting.

ERIGERON SALSUGINOSUS, also called *Aster Salsuginosus*, has large violet-purple flowers not unlike those of *Erigeron speciosus*. It comes from North America, and grows eighteen inches to two feet high, flowering in June and July.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

PLATE 21.

FLEABANE IN VARIOUS TYPES.

1. ERIGERON AURANTIACUS. 2. ERIGERON COULTERI.
3. ERIGERON SPECIOSUS (*syn.* STENACTIS SPECIOSA).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

Eryngium alpinum L.
Eryngium maritimum L.
Eryngium Zabeli. *Hort.*

(See Plate 22.)

The "Sea Hollies" (Eryngium) constitute a noble family among hardy plants. Not only are their flowers most effective when grown in open borders or other suitable places, but they also last a very long time when cut, and are on that account much sought after for decorative purposes. For filling large vases, &c., they are admirably adapted, as they can be cut with long stems or even in large branches without injury to the plant. Sea Hollies will grow in almost any soil, but in light sandy calcareous soil the colouring of the involucre and also of the stems is usually of a much brighter blue. The natural order is *Umbelliferæ*

ERYNGIUM ALPINUM (see Plate No. 22) has its native home in the Alps of Switzerland, Austria, and Italy, and is easily distinguished from its cogeners by its involucre consisting of soft, instead of rigid, bracts. For this reason it can be recognised even in the dark from other kinds by simply passing the hand over the flower heads, which are soft to the touch. The Alpine Eryngium grows about eighteen inches to two feet high, and flowers during July and August. Its stems, and also the bracts enclosing the oval flowerhead, are of a beautiful blue.

ERYNGIUM MARITIMUM, also illustrated on Plate No. 22 by way of contrast, is our native British Sea Holly, which grows wild in abundance on the sea shores in the West of England. It is sometimes planted in gardens, and its quaint beauty cannot be denied. It is too well known to need further description.

ERYNGIUM ZABELI is a recent acquisition raised on the continent, and a cross between *E. alpinum* and *E. Bourgati*. It is very much like *E Oliverianum* (*Delar*), but its flowers have a lighter and more elegant appearance and grow taller than E. Oliverianum, i.e., a yard or so in height.

The following Sea Hollies are not illustrated:—

ERYNGIUM AMETHYSTINUM has its flowerheads enveloped in spiny rigid bracts of a fine Amethyst-blue colour. It is frequently sold as *E. Oliverianum*, but though it resembles the latter it is smaller in all its parts and grows about two to two-and-a-half feet high.

ERYNGIUM BOURGATI has bluish flowers in ovate heads, surrounded by an involucre of ten or twelve rigid bracts, and grows only one foot to two feet high.

ERYNGIUM GIGANTEUM has silvery leaves and stems, and the flowers and bracts only slightly tinged with blue. The bracts of the involucre are much broader than in the other kinds described. The plant grows about four feet high. On some soils it is of only biennial duration.

ERYNGIUM OLIVERIANUM is one of the most handsome border plants forming a bush about two-and-a-half feet through, covered with flowerheads enclosed in an involucre of large blue rigid bracts.

ERYNGIUM PANDANIFOLIUM comes from Monte Video. It has foliage resembling that of the Pandanus, grows ten feet high, and bears purplish flowers almost without any involucre. It is useless for cutting, but in large Parks in the Western or Southern counties it may frequently be seen forming large and effective groups. It grows very rapidly where it is hardy, but can only be considered a half-hardy plant in the Midland and Northern counties.

ERYNGIUM PLANUM is quite a miniature form as regards its flowerheads which (involucre and all) measure scarcely two inches in diameter and are blue all over. The stems are much branched and grow about two to three feet high, giving the plant the appearance of an elegant little bush.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

PLATE 22

SEA HOLLIES.

1. ERYNGIUM ALPINUM. 2. ERYNGIUM MARITIMUM. 3. ERYNGIUM ZABELI.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

Gaillardia hybrida. *Hort.*

(See Plate 23.)

For showy colours no garden flowers can vie with Gaillardias. Of late years this genus has been much improved. The old *Gaillardia picta* is only biennial and some varieties are of only annual duration, but from crosses with the Perennial *Gaillardia aristata* the handsome Gaillardia grandiflora maxima was obtained, which is a true Perennial and has very large showy flowers. The Hybrid Gaillardias have received great attention by various growers, notably by Messrs. Robert Veitch & Sons, of Exeter. This latter firm has by careful selection just raised quite a new type of Perennial Gaillardias, known as *Veitch's compact variety*. This new strain was exhibited at the last Temple Show. Its chief characteristics are a much dwarfer and more compact habit than the old Gaillardia grandiflora, the flowers of which are more or less drooping, and in borders have to be tied up whilst *Veitch's compact strain* has erect flowers on strong wiry stems. Another valuable form just sent out by the same firm is the perennial Gaillardia "*Primrose Dame*" which has large pale yellow flowers without any red.

The coloured plate depicts a batch of Gaillardia so accurately, and this class of plant is so generally known, that I need not give any further description.

The following plants, which are not illustrated, deserve a place among handsome border plants.

GAURA LINDHEIMERI is an elegant Perennial from Texas. It grows three to four feet high, and bears slender and graceful spikes of white flowers tinged with rose. The flowers look delightfully light when used for Vases or other decorations, but unfortunately do not last very long in the cut state. The blossoms are, however, abundantly produced throughout the summer. Propagation is best effected by seeds.

GERBERA JAMESONI. Though not hardy in the North of England this beautiful "Transvaal Daisy" should be grown in every garden in the Southern and Western counties, if a sheltered warm sunny situation and a light friable soil can be found for it. Though still a scarce plant its value is becoming more recognised every year. At Exeter, and several places in Devon, Cornwall, Ireland, and Wales, it has stood several winters without protection. In case of excessive rains during winter a piece of glass or slate, or even a few Fir branches, spread over the crown are a good protection against too much exposure. The Marguerite-like flowers are of the most dazzling orange-scarlet, five inches across, and are borne on long rigid stems two feet high. It will be found doing best in a warm border under a wall. It is such a brilliant ornament in a garden that it is well worth a trial. A beautiful coloured plate appeared some time ago in "The Garden."

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

PLATE 23.

GAILLARDIA HYBRIDA GRANDIFLORA.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

Helenium Hoopesi.

(*See plate 24.*)

Helenium, or *Sneeze-weed*, is a genus containing many excellent Hardy Perennials flowering mostly during the latter part of summer or early autumn. All are easily increased by division.

HELENIUM HOOPESI, the variety illustrated on coloured plate, No. 24, is one of the earliest sorts to bloom as it flowers generally from June to August. It is a native of California and grows about two-and-a-half feet high. The flowers are three inches or so across, and of a deep orange-yellow colour.

The following are not illustrated:—

HELENIUM AUTUMNALE grows four feet to six feet high, and, as the name implies, flowers much later than the preceding variety. The individual flowers are three inches across. The lanceolate leaves are smooth, about four inches long and half-an-inch wide. It is of American origin and makes a fine bold border plant for late summer or autumn display.

HELENIUM BIGELOWII comes from California and flowers in summer. It forms large bushes about two-and-a-half feet high, and bears yellow flowers with dark brown discs.

HELENIUM BOLANDERI has golden yellow flowers with dark brown disc, and blooms in July and August. It grows only eighteen inches or two feet in height, but is very free-flowering.

HELENIUM GRANDICEPS STRIATUM is a stately Perennial and most desirable. It grows four to five feet high, and has its numerous yellow flowers striped and blotched with maroon and crimson. It is a strong grower and the flowers last till very late in autumn.

HELENIUM PUMILUM flowers in August and September, growing only one foot or so in height. It is also of American origin, and its bright golden yellow flowers are most abundantly produced. Fine effects can be produced by planting masses of this together so as to form a dwarf bright carpet among taller plants in either border or shrubbery.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

PLATE 24.

SNEEZE-WEED.

HELENIUM HOOPESI.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

Helianthus giganteus L.

(See Plate 25.)

Perennial Sunflowers have gained much favour of late years for bold decorative effects. Either for large vases or for telling groups out-of-doors, say in the background of a border or grouped in front of shrubs, or even distributed as single specimens on the lawn or in the "Wild Garden," sunflowers may be made a conspicuous as well as an attractive feature.

HELIANTHUS GIGANTEUS, which is illustrated on Plate No. 25, is one of the largest, not with regard to the size of its flowers which are of a bright golden yellow and about two-and-a-half inches or so in diameter, but with regard to its general growth. It attains a height of eight feet or more, and the flowers are produced in great abundance from August till October. For so strong a grower a deep nutritious soil is naturally required. Propagation is best effected by division in spring or autumn.

Of the very large number of other Helianthus which are not illustrated I will mention only a few of the best.

HELIANTHUS DECAPETALUS flowers in August and grows about five feet high. The colour of the flowers is of a somewhat paler shade than that of most Sunflowers, and is best described as a sulphur colour. It is a fine plant for cutting.

HELIANTHUS LÆTIFLORUS has deep yellow flowers somewhat resembling those of *Helianthus rigidus* depicted on the next Plate (No. 26), but is more robust and flowers somewhat later in August. Its height is generally about five to six feet (syn. *H. atrorubens*.

HELIANTHUS LÆTIFOLIUS "MISS MELLISH" is one of the finest of all Helianthus, and one of the most elegant forms for cutting, growing about six feet high and bearing from August to September an abundance of deep golden yellow flowers on long rigid stems.

HELIANTHUS MOLLIS is still a rare plant. It is of North American origin and grows about four feet high, having dark stems and silvery foliage. The flowers, which are freely produced, are pale yellow with black centre.

HELIANTHUS MULTIFLORUS is a very old single Sunflower, distinguished by robust growth and bright yellow flowers with very broad ray florets. Of this there are several sub-varieties of which the best are:

HELIANTHUS MULTIFLORUS "BOUQUET D'OR," 4 feet high, with bright golden yellow flowers.

HELIANTHUS MULTIFLORUS MAXIMUS, an enormous single flower growing six feet or more in height.

HELIANTHUS MULTIFLORUS FLORE PLENO, a handsome double form, now well known and largely grown even in small cottage gardens. The deep golden yellow double flowers are four inches across, and are most abundantly produced from August to October on stems four to five feet high.

HELIANTHUS ORGYALIS is a very tall species growing eight or nine feet high, and is very distinct. The flowers are comparatively small and are borne in a panicle on short pedicles. The leaves are very narrow and about eight inches long, with an elegant drooping habit reminding more of willow leaves than those of a Sunflower.

Digitized by Google

Original from UNIVERSITY OF MICHIGAN

PLATE 25.

PERENNIAL SUNFLOWER.

(HELIANTHUS GIGANTEUS).

Digitized by Google Original from UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

Helianthus rigidus.

(See Plate 26.)

COREOPSIS GRANDIFLORA, also illustrated on this plate, is described on page 36 in its proper alphabetical order.*

HELIANTHUS RIGIDUS is also known under the name of *Harpalium rigidum*. It is undoubtedly a very bright and useful flower, consisting of bright golden yellow ray florets and a dark disc; it flowers very freely, and grows three to four feet high. It increases very rapidly, and unless kept in check is apt to take possession of the border in which it is planted. It is one of the earliest Sunflowers, blooming in July and lasting but seldom longer than August. Its beauty is far surpassed by the variety "Miss Mellish" mentioned previously (page 58).

Heliopsis.

This is a genus of plants not represented by illustrations but closely allied to the Helianthus family, which it much resembles both with regard to flowers and cultivation. The following are the best:

HELIOPSIS LÆVIS grows about four feet high, and has flowers of a distinct orange-yellow shade. It grows vigorously and flowers abundantly. The individual flowers are comparatively small being scarcely two inches across, but they are well adapted for cutting.

HELIOPSIS LÆVIS VAR. B. LADHAMS is an improvement on the last, and makes a showy plant of robust growth and with flowers much larger than those of the old type.

HELIOPSIS SCABRA has ray florets an inch in length with broad petals. It flowers generally throughout the month of August. The plant grows three-and-a-half to four feet in height, and has ovate lanceolate leaves. Its native country is North America. This plant also goes by the synonym of *Heliopsis canescens*.

---

*NOTE.—Though the descriptive matter in this work is entirely different from the Continental editions, the coloured plates are identical, and as the latter are quite differently arranged in the original work, there are one or two unavoidable instances in which plants of a different genus are illustrated together on the same plate.—F.W.M.

Digitized by Google

Original from UNIVERSITY OF MICHIGAN

PLATE 26.

1. HELIANTHUS RIGIDUS. 2. COREOPSIS GRANDIFLORA.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

"LENTEN ROSES."

Helleborus varieties.

(See Plate 27.)

The varieties of Helleborus illustrated on Plate 27, belong to the section known as *Lenten Roses*, in distinction to the perhaps still more popular varieties of *Helleborus niger*, known as "Christmas Roses." The Lenten Roses flower later in spring, and many of them are handsome border flowers, though some of the greenish kinds can scarcely be called florists' flowers.

The varieties illustrated are Hybrids, obtained by crossing some of the best kinds. The most inportant kinds of Lenten Roses are:—

HELLEBORUS ABCHASICUS, with deep purple flowers, two inches across. A native from the Caucasus, growing about twelve inches high, and flowering from January to March.

HELLEBORUS ATRORUBENS is about eighteen inches high. The flowers are a bright purple colour when first open, but change with age to a duller tint.

HELLEBORUS CAUCASICUS is more curious than pretty, having pale green flowers and dark green glossy leaves three to four inches long. The plant grows about eighteen inches high.

HELLEBORUS COLCHICUS has violet-purple flowers with yellow stamens, and flowers from January to March.

HELLEBORUS GUTTATUS has large white flowers spotted with reddish purple, and flowers very freely. Of this there are several sub-varieties, two of the best of which are *H. g. Ernst Benary*, which is white and thickly spotted with purplish crimson; and *H. g. Leichtlini* with spots of a lighter hue.

HELLEBORUS LIVIDUS has green flowers and is a strong grower.

HELLEBORUS ORIENTALIS has large flowers, which are rose-coloured inside and purplish on the outside. Of this form various hybrids have been raised, such as *Gretchen Heinemann*, rosy purple; *Apotheker Bogren*, with large purplish crimson flowers; and others too numerous to mention.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

PLATE 27.

"LENTEN ROSES"

IN VARIOUS FORMS.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

"Christmas Roses."

HELLEBORUS NIGER, the well-known Christmas Rose and its varieties are among the most valuable of flowers for cutting in midwinter. In the ordinary way the large white flowers, which are sometimes tinged with pink, open about Christmas or January, but under the slight protection of a hand light blooms can be had much earlier, and the flowers grown under a handlight are of course cleaner than those exposed to rain and mud. Among the best varieties are:—

HELLEBORUS NIGER MAJOR, "DEVONSHIRE VARIETY." This is extensively grown in Exeter and in other parts of Devonshire, where its pure white blossoms are most eagerly sought by florists.

HELLEBORUS NIGER VAR. MAXIMUS attains a height of eighteen inches or more, and bears very large white flowers slightly tinged with pink on the outside.

All Helleborus love a half-shady moist position and are easily increased by division.

Hemerocallis (Day Lilies.)

This genus, though not illustrated, contains many handsome species which cannot be passed over in a work dealing with Hardy Perennials. Generally speaking they do not last long in a cut state, but as ornamental plants by the waterside or in moist borders they have a distinct merit. Among the best are:—

HEMEROCALLIS AURANTIACA, bright orange-coloured flowers, six to eight in a corymb; grows three feet high and is presumed to be of Japanese origin. The flowering time is June and July. *Hemerocallis aurantiaca major* is a sub-variety with large trumpet shaped orange-coloured flowers. Other good sorts are:—

HEMEROCALLIS DUMORTIERI, orange-yellow tinged with brown, and growing two feet high.

HEMEROCALLIS FLAVA, two to three feet high, with golden yellow flowers.

HEMEROCALLIS FULVA, four feet high, a robust grower with flowers of a coppery colour.

HEMEROCALLIS MIDDENDORFIANA, deep yellow, two to three feet high.

HEMEROCALLIS THUNBERGI, very sweet-scented, clear yellow flowers, growing eighteen inches high.

Digitized by Google

Original from UNIVERSITY OF MICHIGAN

Hesperis matronalis L. var. alba

AND

Hesperis matronalis flore albo pleno.

(*See Plate 28.*)

(ARABIS ALPINA, FL. PL., which is shown on the same plate, is described in its proper alphabetical order on page 18.)

Rockets, or Hesperis, are among the oldest of our garden flowers. But though they played an important part among the old-fashioned flowers of our grandfathers, they are valued just as highly now as then.

HESPERIS MATRONALIS is the old purple Rocket so frequently seen in cottage gardens, which also goes by the name of *Dame's Violet.* Its sweet scent is more noticeable during the evening than during the day. Of this there is also a double form.

HESPERIS MATRONALIS ALBA, or as it is called by some growers, *H. candidissima*, is shown on coloured plate, No. 28. It grows about two-and-a-half feet high and is well adapted for either the border or for cuttings.

HESPERIS MATRONALIS FLORE ALBO PLENO, which is also shown on Plate No. 28, is by far the most valuable of all Rockets on account of its handsome double flowers, which are useful for florists' work. The flowering time is May and June. It will grow almost anywhere, but prefers a deep soil in a half-shady position.

Propagation of the single forms is easily effected by seeds, while the double varieties should be lifted from the ground and divided. If not lifted and transplanted or divided old plants are apt to die off.

Incarvillea.

No plants of this genus are here illustrated, but good coloured plates appeared some time ago in "The Garden."

INCARVILLEA DELAVAYI cannot be omitted in a book on herbaceous plants, as it must be classed among the choicest and handsomest hardy perennials in existence. It is a native of China and its immense popularity in Great Britain is of a comparatively recent date. It grows about two feet high, bearing often as many as a dozen flowers on one scape. The individual flowers are tubular, somewhat resembling a Gloxinia but with a more expanded corolla, almost reminding of *Allamanda* except for the colour which is bright rose. The leaves are pinnate, fifteen to eighteen inches long. It makes a noble and distinctive border plant, and is perfectly hardy. Propagation by seed.

INCARVILLEA OLGÆ also makes a very handsome border plant. Its home is Turkestan, the flowers are bright rose, similar in colour to the preceding variety (*I. Delavayi*), but both flowers and leaves are much smaller, while the plant itself grows higher, forming a compact bush of very ornamental appearance.

Digitized by Google

Original from UNIVERSITY OF MICHIGAN

PLATE 28.

ROCKETS, &c.

1. HESPERIS MATRONALIS ALBA. 2. HESPERIS MATRONALIS FLORE ALBO PLENO.

3. ARABIS ALPINA FL. PL.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

Heuchera sanguinea *Engelm.*

Heuchera sanguinea alba *H.*

Heuchera rosea *Zabel.*

AND

Heuchera rubescens. *Torr.*

(See Plate 29.)

The genus HEUCHERA (*Alum Root*), has of late years become of more importance for our gardens than formerly. Many years ago the only Heucheras known in this country were the coarse growing kinds from North America, but since the introduction of *Heuchera sanguinea* and its hybrids many bright gems have been added to our flower gardens.

HEUCHERA SANGUINEA (see Plate No. 29) comes from Northern Mexico, grows about eighteen inches high and bears in July and August light panicles of coral-red flowers, most suitable when cut for small vases, &c. But also in the flower-garden *Heuchera sanguinea* is a great acquisition and may be used for borders, beds, or rock gardens with equally good effect. Its value is enhanced by the evergreen cordate leaves, which form a compact little bush, quite ornamental even when not in bloom. The plant will grow in almost any soil, but if it should be heavy a little peat or leaf mould added to the soil will produce excellent results. Propagation is best effected by division.

HEUCHERA SANGUINEA ALBA, also illustrated on Plate No. 29, is a white form of recent introduction, and a good companion for the red variety.

HEUCHERA SANGUINEA GRANDIFLORA is a further improvement on the type and is distinguished by having larger flowers of a still deeper coral-red and growing two feet or more in height.

HEUCHERA ROSEA (*Zabel*) is a cross between Heuchera sanguinea and the Californian *H. pilosissima*. It is distinguished by much larger flowers of a beautiful rose colour, arranged in panicles of more compact shape than those of the type.

HEUCHERA RUBESCENS, sometimes called *H. erubescens*, bears a very loose panicle of minute white flowers, while the buds and stems are red. It lasts a long time when cut, and may be used with good effect for light arrangements of flowers. The coloured plate, No. 29, shows its character.

Other forms of Heuchera with flowers less showy than those of the *Heuchera sanguinea* type, but with ornamental leaves and often used with good effect in borders are:—

HEUCHERA BRIZOIDES, a hybrid between *Tiarella purpurea* and *Heuchera sanguinea*, having brownish purple flowers.

HEUCHERA HISPIDA, also known by the synonym *H. Richardsoni*, with large mottled leaves and bearing a large nnmber of flowers, veined with purple, growing about 2 feet high.

Digitized by Google

Original from UNIVERSITY OF MICHIGAN

PLATE 29.

VARIETIES OF "ALUM ROOTS."

1. HEUCHERA SANGUINEA.
2. HEUCHERA SANGUINEA ALBA.
3. HEUCHERA ROSEA (ZABEL).
4. HEUCHERA RUBESCENS.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Digitized by Google
Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

Inula glandulosa *Pusck.*

Inula glandulosa var. laciniata

Inula macrocephala *Boiss. & Ky.*

(*See Plate 30.*)

INULA GLANDULOSA, illustrated on plate No. 30, is a very handsome border plant. It is a native from the Caucasus, and grows eighteen inches to two feet high, bearing in July and August very fine flowers about four inches across. The colour is a very deep yellow verging on orange, but in this country seldom quite as deeply coloured as the illustration. The leaves are sessile, oblong, and slightly serrated; both stems and leaves are covered with soft hairs. The best mode of propagation is by division in autumn, or by seed in spring.

INULA GLANDULOSA VAR. LACINIATA is of recent introduction and is depicted on the same Plate, No. 30. The colour is the same as that of the older form (*I. glandulosa*), but the ligules of the ray florets are finely laciniated. Both kinds are excellent plants for the flower garden, and well adapted for cutting; planted in masses the effect is very striking. Unfortunately the flowering season does not last very long, and these plants should therefore be associated in the border with other plants blooming earlier as well as later to ensure successive display.

INULA MACROCEPHALA (No. 3, Plate No. 30) is a bold variety often used in continental gardens. It grows five to six feet high and has enormous leaves measuring two-and-a-half feet in length and oval in shape. The flowers are light yellow.

Of not illustrated forms I will mention:—

INULA ENSIFOLIA, a pigmy, forming a compact little bush seldom more than nine inches high. The flowers are of a deep golden yellow about two inches across. The leaves are alternate, densely crowded and linear in shape. It is also a native from the Caucasus and flowers in July. For small floral arrangements the flowers are well suited as they are borne on rigid stems; but the chief use for *Inula ensifolia* will be as a front row plant for borders, for beds, or for the rock garden.

INULA GRANDIFLORA is found in the Caucasus and in Persia. It has orange-coloured flowers three-and-a-half to four inches across, and grows about two feet high. It is an excellent border plant and blooms in July.

INULA HELENIUM is a giant form growing six and even eight feet high, especially if planted in a moist position, say by the margin of a pond or stream. The large flower-heads are bright yellow, and appear in clusters on short thick stems. As the leaves, too, are very large, measuring often three feet in length, the plant is particularly well adapted for bold effects either singly or in groups.

INULA HOOKERI is a Himalayan species growing two feet high, with slightly scented bright yellow flowers, blooming in July or August.

Digitized by Google

Original from UNIVERSITY OF MICHIGAN

PLATE 30.

1. INULA GLANDULOSA. 2. INULA GLANDULOSA LACINIATA.
3. INULA MACROCEPHALA.

Digitized by Google Original from UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

Iris germanica L.

(See Plate 31.)

"The Poor Man's Cattleya" is a name sometimes given to these glorious "Flag Flowers," and, indeed, both in shape as well as in colour they much resemble this most beautiful class of Orchids. But they are cheap and easily grown, and, therefore, unfortunately often more or less neglected. But for all purposes the so-called "German Iris" must rank foremost among hardy flowers. It would not be within the limits of this small work to name even a fraction of the hundreds of varieties of *Iris germanica* now in commerce, especially as sometimes different names are given to plants that are apparently identical. The best way to secure a really good collection according to one's taste is to select the sorts when they can be seen in bloom.

The German Iris furnish us with an excellent material for adorning borders, outskirts of shrubberies, or margins of streams and ponds. For the latter purpose they are admirably suited, as they love moisture and prefer heavy to light soil. In planting care should be taken not to plant them too deep. The rhizome, if planted in wet ground, should be above and not below the surface. German Iris always look best if planted in masses consisting of not too many mixed colours. A good size group of irregular outline, consisting of only one colour, or of not more than two or three distinct colours which go well together, is far more effective than a general mixture in which, perhaps, one colour is totally spoilt by another. A good collection of distinct colours of German Iris is illustrated on Plate No. 31.

The many bulbous kinds of Iris, or as they are now called, *Xiphions*, such as the English Iris (*Iris Anglica*), *I. Histrio*, *I. reticulata*, the Spanish Iris (*Iris Xiphium*), &c., &c., do not come within the scope of this work; but of the rhizomatous species, or Irises proper, I will mention at least a few of the best for general use.

IRIS AUREA was figured in "The Garden" of January 15th, 1887. It is a Himalayan species about three feet high, bearing bright yellow flowers in June.

IRIS DELAVAYI is a violet-blue species from China, with long narrow leaves and tall flower spikes. It is well adapted for a moist border.

IRIS FIMBRIATA (syn. *I. japonica*), is hardy only in very warm and sheltered spots in the western or southern counties. The flowers are pale lilac-blue veined with white. The falls are beautifully crisped and fringed; it grows about twelve to fifteen inches high.

IRIS FŒTIDISSIMA, our native Gladwin or Spurge-wort, grows wild in hedgerows in many parts of Devon and Cornwall, but is often cultivated for the sake of its bright orange-red seeds, which are highly ornamental and are firmly held for weeks in three-cornered pods, which, when open, show the seeds fully exposed.

IRIS FLORENTINA is a bold species with white flowers tinged with lilac, and growing two-and-a-half feet high.

IRIS FLORENTINA ALBICANS is a pure white form introduced from Spain. The flowers are fragrant and slightly smaller than the type.

IRIS KÆMPFERI is treated in connection with the next Plate, No. 32.

IRIS LONGIPETALA is a Californian species growing two to three feet high, with lavender standard and pale blue falls veined with white.

IRIS PALLIDA grows about two-and-a-half feet high and has lavender-blue flowers, delightfully scented and of great size. Of this there are various shades, among the best *I. p. Dalmatica* and *I. p. fol. aureo marginatis*, which latter has beautifully variegated leaves.

IRIS SIBERICA has flowers of a bright violet-blue and grows about three-and-a-half feet high. It flowers in May or June.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

PLATE 31.

VARIETIES OF "GERMAN" IRIS.

Digitized by Google
Original from UNIVERSITY OF CALIFORNIA

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

JAPANESE IRIS.

Iris Kæmpferi. *Sieb.*

Syn. IRIS LÆVIGATA. *Fisch.*

(See Plate 32.)

The Japanese Iris *(Iris Kæmpferi)* follow in their flowering season immediately after the German Iris. The difference between the two is very marked indeed, and can be distinguished at a glance. These Japanese Iris grow about three feet high, and their broadly expanded flowers have a flat appearance varying from six to nine inches in diameter. Some of the colours are very beautiful, ranging through all shades of red, blue, purple, indigo, white, rose, &c., and sometimes beautifully striped or blotched. The foliage is very narrow and grass-like. Fully expanded flowers, when cut, do not travel well, but if cut in the state of buds they may be sent to any distance and will expand in water.

IRIS KÆMPFERI loves sunshine and an abundance of moisture during its growing season. It objects, however, to stagnant moisture during winter. The most effective display of Japanese Iris may be obtained by grouping them in masses in a bog bed containing peaty soil, or on the banks and margins of ponds or streams. But the bog bed should be so constructed as to be under control, and the water should be drained off during the winter months. Propagation is best effected by division in spring.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

PLATE 32.

JAPANESE IRIS.

IRIS KÆMPFERI (*syn.* I. LÆVIGATA).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

I will now briefly deal with a few other genera of plants not represented by illustrations, but well worthy of a prominent place among hardy perennials.

LIATRIS PYCNOSTACHYA (*Snake Root*). This belongs to the order of *Compositae*, though at a first glance no one would suspect it, for the rosy purple flower-heads are arranged in a long cylindrical spike growing three to four feet and even five feet high, and, curiously enough, flowering from the top downwards. Sometimes the flowering spike is twisted. The flowering season is September and October, and the plant looks well in the border associated with Rudbeckia or other autumn-flowering perennials. In a cut state the flower spikes last a long time, as unexpanded buds continue to open after cutting, and sometimes more than half a yard of densely crowded blossoms may be seen in full bloom on one spike. Its native home is America.

LIATRIS SCARIOSA is a desirable species about two-and-a-half feet high, distinguished by having its purple flowers arranged in a loose elongated corymb.

LIATRIS SPICATA also has rosy purple blossoms, but does not grow as tall as *L. pycnostachya*. It attains a height of two or two-and-a-half feet, and the flower-heads are arranged loosely over the upright stems.

LIBERTIA FORMOSA is a native of Chili and grows about eighteen inches to two feet high, thriving well in a warm border. It has grass-like foliage and handsome spikes of white flowers. Natural order *Irideae*.

LINUM ARBOREUM is a handsome yellow flowering perennial from Crete blooming in June. It grows about twelve to eighteen inches high, and requires a warm sunny border. In the north it should be protected during winter. Other good Linums are:—

LINUM FLAVUM with yellow flowers in July, growing eighteen inches high.

LINUM MARITIMUM, small yellow flowers.

LINUM MONOGYNUM, a New Zealand species eighteen inches high, and bearing large white flowers in June and July.

LINUM NARBONNENSE, two feet high, with handsome blue flowers.

LINUM SALSALOIDES, twelve to fifteen inches high, bearing large white flowers, with a purple eye; blooming June and July.

LOBELIA CARDINALIS. This brilliant scarlet cardinal flower unfortunately is not hardy in the northern and eastern counties, but in Cornwall and other warm parts its magnificent showy flowers are the greatest ornament to the garden towards the autumn. The same might be said of the brilliant *L. fulgens* "Queen Victoria," with bronzy leaves and spikes of scarlet flowers two to two-and-a-half feet high; and *L. violacea*, of a rich purple colour. More hardy than these are *L. syphilitica*, with tall spikes of blue flowers, and its subvariety *L. s. alba*, with white flowers. By hybridisation a large number of new varieties has been raised, some of which are excellent, but the limited space at my disposal does not permit of a more lengthy reference.

LOBELIA CAVANILLESII. This rare and handsome perennial is unfortunately not hardy in the north or the midlands, but in Cornwall and Devonshire it does well out-of-doors. A particularly fine bush, measuring 5 feet through and 2 feet high, may be seen planted on a sunny slope in Messrs. Veitch's Nurseries at Exeter. The flowers are 1½ to 2 inches in length, tubular in shape, and bright scarlet in colour, and borne on wiry pedicels about 2 inches to 2½ inches long, appearing from the axils of the leaves. In newly opened flowers the under lip and throat are bright golden yellow, which gradually changes to a dull orange-red with older flowers. The leaves resemble those of a willow, they are 5 to 6 inches long and ¼ inch to ½ inch wide, with a minutely toothed margin.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

HARDY LUPINS.

Lupinus arboreus. *Sinos.*

Lupinus arboreus albus.

Lupinus nootkatensis.

Lupinus polyphyllus.

Lupinus polyphyllus albus.

(*See Plate 33.*)

The hardy Lupins form a most important group of plants for our gardens. In early summer their handsome spikes of large flowers are most attractive.

LUPINUS ARBOREUS is of Californian origin, and is a most stately Perennial, bearing masses of sweet-scented yellow flowers lasting almost throughout the summer (see No. 1, Plate 33). In cold parts in the north of Great Britain its shoots die down to the ground every year, but in the southern and western counties it forms a shrubby bush often more than 6 feet in height. Propagation is best effected by seeds.

LUPINUS ARBOREUS ALBUS (see No. 2, Plate 33) is a pure white form of the former, which it closely resembles in other respects. In the back-ground of a rock garden, or in the margin of a shrubbery, few plants of more striking appearance could be found than these handsome Tree-Lupins. For cutting, too, their flowers are well adapted.

LUPINUS NOOTKATENSIS (see No. 3, Plate 33) is much dwarfer in its growth, attaining but seldom more than 2½ feet in height. Its native home is Nootka Sound. The blue flowers have generally a very distinct shade of purple in the upper part of the flower. The palmate leaves are 5 to 6 inches across, and are heavy on the under surface. It is a handsome border plant, where its flowers will often last till August.

LUPINUS POLYPHYLLUS (see No. 4, Plate 33) has handsome blue flowers growing 3 to 4 feet high, and blooms during May and June; it is one of our most effective border plants, and lasts when cut for a considerable time.

LUPINUS POLYPHYLLUS ALBUS (see No. 5, Plate 33) differs little from the former, except that the flowers are pure white, and on that account perhaps still more valuable. All Lupins mentioned are most easily propagated by seed or division.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

PLATE 33.

HARDY LUPINS.

1. LUPINUS ARBOREUS.
2. LUPINUS ARBOREUS ALBUS.
3. LUPINUS NOOTKATENSIS.
4. LUPINUS POLYPHYLLUS.
5. LUPINUS POLYPHYLLUS ALBUS.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Digitized by Google
Original from
UNIVERSITY OF MICHIGAN

Of plants not illustrated in this work, but which should be in every garden, I will mention the following :—

LYCHNIS CHALCEDONICA, the old-fashioned scarlet Lychnis is too well-known to need description, its dazzling brilliant scarlet flowers on long stems make it a most valuable plant both for effective display in the garden and for cutting. There is also a white variety, which, however, has generally a slight shade of pink in it.

LYCHNIS FULGENS grows only 12 inches high, and has large flowers of a bright vermillion. The variety, L. f. grandiflora, comes from China, and has flowers 2 inches across.

LYCHNIS VESPERTINA FL. PL. flowers from June to September, bearing on stems 2 feet or more in height a number of white fragrant flowers of the size of a florin.

LYCHNIS VISCARIA SPLENDENS is an improvement on the so-called German Catch-fly, bearing clusters of large, rosy, crimson flowers on stems 18 inches high.

LYTHRUM ROSEUM SUPERBUM grows 3 feet high, and bears spikes of bright, rosy, crimson flowers. It is especially suited for a damp position.

MEGASSEA CORDIFOLIA PURPUREA is perhaps not adapted for cutting, but its handsome, very large evergreen leathery leaves and dense spikes of pink flowers make it a most attractive plant for the border or the rock garden, where it forms a compact spreading bush not more than 18 inches high.

MORINA LONGIFOLIA grows about 2½ feet high, and has flowers which are white in the bud, but change to crimson. The foliage is of thistle-like appearance, and emits a peculiar fragrance.

ŒNOTHERA, or Evening Primrose, is an important genus of plants of great value for borders rock-work, &c., but of little value as cut flowers. Owing to the limited space at my disposal I can mention only a few of the best. *Œnothera fruticosa*, yellow, 2 feet high ; *Œnothera macrocarpa*, yellow with semi-prostrate stems ; *Œnothera speciosa*, with white flowers ; *Œnothera speciosa rosea*, with pink flowers, and *Œnothera Youngi*, with yellow flowers on red stems, 18 inches to 2 feet high.

ONOSMA TAURICUM is an excellent plant for a sunny border or rock-work in a position where its golden yellow flowers can display their elegant drooping habit. In the northern counties it requires protection during exceptionally severe winters.

ONOSMA PYRAMIDALIS is a new kind, with scarlet flowers.

PÆONIA MOUTAN. The Chinese or Tree-Pæony is one of our stateliest garden-plants, forming noble bushes 4 feet or more in height, with exquisite large flowers ranging from white to all shades of pink and crimson. Propagation by grafting on the roots of *P. officinalis*. Planting time, September and October

PÆONIA OFFICINALIS is our old-fashioned red or white herbaceous Pæony, found in almost every cottage garden. Of late years an enormous number of hybrids have been raised, some of them of exquisitely delicate shades of blush pink, cream, rose, &c., &c., in single and double forms. For bold effect in the spring-time their flowers can scarcely be equalled. The best time for planting is from October to March.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

ICELAND POPPIES.

Papaver nudicaule L.

(*See Plate 34.*)

PAPAVER NUDICAULE, the yellow Iceland Poppy, grows about 12 to 15 inches high, and forms a handsome plant for the front of a border, for rock-work, or for cutting. If the flowers are cut when just opening they will last in water for many days. The leaves are deeply cut, and like, the stems, are covered with minute hairs. (See Illustration No. 1, Plate 34.) Its native home is Siberia.

PAPAVER NUDICAULE ALBUM (No. 2, Plate 34) is a white form of the former, which it resembles in other respects. Although the Iceland Poppies are true perennials they are best treated as biennials, as the old plants are apt to die off—especially on damp ground. They propagate, however, very freely from seeds.

PAPAVER NUDICAULE MINIATUM (see No. 3, Plate 34) is the showiest of all, being bright orange-scarlet in colour and very glossy. As in all Poppies, the two-lobed calyx which firmly encloses the flower-buds falls off entirely when the flowers open, and a newly opened flower has therefore that peculiar wrinkled appearance reminding of crumpled silk.

Of other plants not illustrated the following must be mentioned :—

PAPAVER ORIENTALE, from Armenia, grows about 3 feet high, and bears scarlet or orange-scarlet flowers 8 inches across, having a black or dark purple spot at the base of each petal. The pinnate leaves are 10 to 14 inches long and are covered with stiff hairs. It is a very lasting perennial, flowering in June, and highly ornamental for the garden, but the flowers do not last very long when cut.

PAPAVER ORIENTALE BRACTEATUM is a variety with deep crimson petals, also bearing a large black spot.

PAPAVER ORIENTALE CONCOLOR is distinguished by having no spots, but resembling the type in other respects.

Besides the Oriental Poppies already mentioned nearly every catalogue contains a vast number of hybrids to which separate names have been given, such as *Blush Queen*, *Livermere*, *Rosy Gem*, *Salmon Queen*, &c., &c., in various shades of crimson, pink, salmon, &c., many of which are excellent border plants.

PENTSTEMON BARBATUS (also known as *Chelone barbata*) is a handsome tall perennial, growing 4 feet high, bearing numerous tubular coral-red flowers with a bearded under-lip. The throat is striped with yellow. The flowering time is July. The plant enjoys a damp position, and does exceedingly well on the margin of a stream or in a moist border. The variety *Pentstemon barbatus Torreyi* has the lip only slightly bearded, and the flowers are of a deep scarlet colour and rather longer than in the type.

PENTSTEMON HYBRIDUS. The well known garden hybrids of Pentstemon mostly originate from *P. Hartwegi* and *P. Cobæa*. An enormous number have separate names, and as they range through many shades of colour and flower till late in the autumn they must be reckoned among our most useful garden flowers. Most hybrid Pentstemons prefer a well-drained light soil. As they are sometimes apt to die off without any apparent cause it is well to keep a stock of young plants for replenishing vacancies.

PENTSTEMON SCOULERI is a lovely species with lilac-blue flowers on numerous flower spikes, forming a handsome bush about 1½ to 2 feet high.

PENTSTEMON WRIGHTII has rosy-crimson flowers and grows about 2 feet high.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

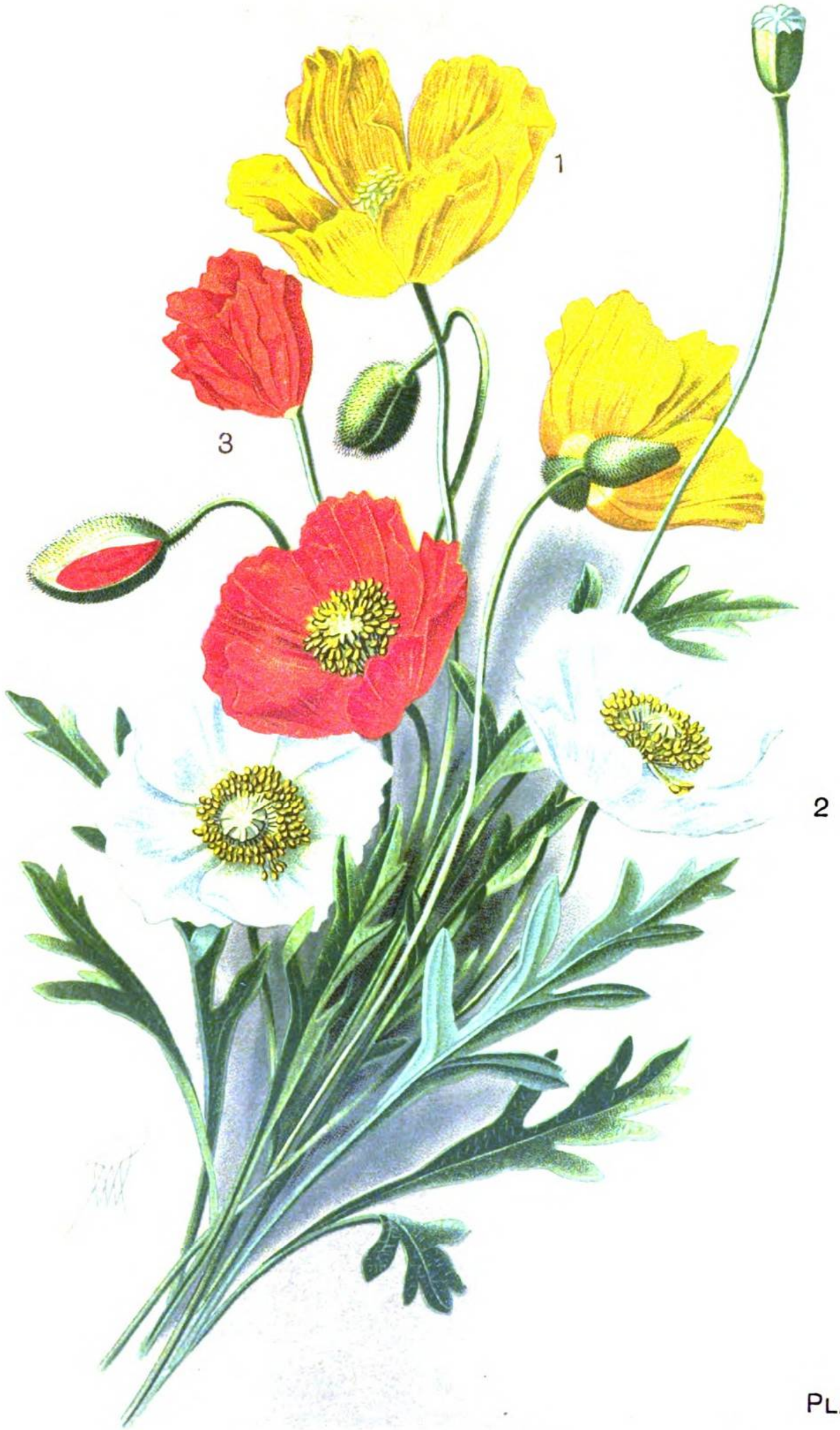

PLATE 34.

ICELAND POPPIES.

1. PAPAVER NUDICAULE. 2. PAPAVER NUDICAULE ALBUM.

3. PAPAVER NUDICAULE MINIATUM.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

SHORT VARIETIES OF PHLOX.

Phlox divaricata L. *Syn. Phlox canadensis* (Sweet),

Phlox divaricata alba. *Syn. Phlox canadensis alba*,

AND

Phlox reptans michx. *Syn. Phlox stolonifera.*

(*See Plate 35.*)

PHLOX DIVARICATA, or as it is often called *Phlox canadensis*, comes from Canada, and is a gem among spring-flowering hardy plants. Though the main stems are prostrate, the numerous flowering shoots stand up erect and bear forked corymbs of large lilac-blue flowers raised about 10 to 15 inches above the ground. The lobes of the corolla are cuneate and notched at the ends. The sessile leaves are ovate-lanceolate. May is the time of flowering, and as the blossoms are produced in great abundance *Phlox divaricata* is a most desirable plant for brightening our gardens in spring and early summer. It is most suited for a sunny position in the front part of a border, or for display in a rock garden, and might also be used with good effect for spring bedding. Plate 35, Fig. 1 shows an illustration of this variety.

PHLOX DIVARICATA ALBA, known also as *Phlox canadensis alba*, is illustrated in Fig. 2, Plate 35. It differs from the last only in colour, which is generally pure white, but sometimes slightly diffused with pale lilac at the back of the petals.

PHLOX REPTANS (No. 3, Plate 34) is also a native of North America. Its flowers are purplish-rose, borne in corymbs on erect stems 9 to 12 inches high. Like *Phlox divaricata* it has also numerous non-flowering shoots which lie prostrate on the ground and form a kind of carpet. It flowers from April to end of May, and is well adapted for margins or for being planted on rock-work. Syn. *Phlox stolonifera.*

PHLOX OVATA is not illustrated, but is a desirable plant, growing 12 to 18 inches high and bearing purplish-rose coloured flowers. This is similar to *Phlox reptans*, but more robust, and it flowers somewhat later than the last-named species.

The Alpine Phloxes, such as the Moss Pink, *Phlox subulata*, and its numerous varieties, form neat spreading cushions close to the ground, and are too dwarf to be considered among the plants dealt with in this work.

Other varieties of Phlox, including some of the taller kinds, are dealt with in connection with the next Plate (36).

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

PLATE 35.

SHORT VARIETIES OF PHLOX.

1. PHLOX DIVARICATA L. (*syn.* PHLOX CANADENSIS, *Sweet*). 2. PHLOX DIVARICATA ALBA (*syn.* CANADENSIS ALBA.)

3. PHLOX REPTANS (*syn.* STOLONIFERA).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

HERBACEOUS PHLOXES.

Phlox decussata

AND

Phlox suffruticosa.

(*See Plate 36.*)

Under these names the so-called "herbaceous" Phloxes are generally divided into sections of *Early flowering* (*suffruticosa*) and *Late flowering* (*decussata*) varieties. But by constant crossing with other forms, such as *Phlox acuminata*, *Phlox pyramidalis*, &c., &c., the garden varieties of Phloxes are now inter-mixed to such an extent that it is impossible to separate them into distinct species. But whatever their origin might have been, the fact remains that these herbaceous Phloxes are among our showiest garden flowers, and their usefulness is increased by the fact that they are easily divided, and where immediate effect is required even clumps in full bloom might be transplanted if carefully lifted. A rather heavy soil suits them best. Most of the early flowering or *suffruticosa* section are shrubby in habit and not as tall as the late flowering kinds of the *decussata* type, although there are several exceptions.

Of the many hundreds of garden varieties I will mention only a few as being among the best :—

TALL LATE VARIETIES (*decussata*).—*Coquelicot* (see No. 1, Plate 36), brilliant scarlet, without doubt the brightest of all. *Defiance*, rosy crimson. *Darwin*, salmon pink. *Etna* (No. 2, Plate 36), fiery crimson. *Flambeau*, fiery red. *Jeanne d'Arc*, white. *Le Destin*, white, rose centre. *Mrs. Croll*, lilac, dark centre. *Cberon*, rosy violet, bordered white. *Mrs. Jenkins* (No. 6, Plate 36), pure white. *Sybille*, rose, light centre. *The Queen*, pure white.

EARLY FLOWERING VARIETIES (*suffruticosa*).—*Avalanche*, creamy white. *Charles Downie*, rosy purple. *Deliverance*, mauve, dark eye. *Fleur de Neige*, pure white. *King (of Purples*, dark purple. *Louis Schwartz*, pure white. *Mrs. Miller*, purplish red. *Snowdon* No. 5, Plate 36), pure white. *Syren*, lilac and white.

In planting Phloxes it will be well to bear in mind that the late flowering kinds generally begin their blooming when the early kinds have finished, and that with a little care a successive display may be obtained.

PHYGELIUS CAPENSIS. This is a most useful late flowering perennial known as the *Cape Figwort*. It is an excellent plant for the western counties, often attaining the height of 3 feet, and blooming till late in the autumn. The coral-red tubular flowers are 2 inches or more in length and are borne on opposite peduncles. The leaves also are opposite, 3 inches or so in length, with a crenate margin, and ovate-lanceolate in shape. Light rich soil will suit its requirements best. The plant is a native of South Africa.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

PLATE 36

HYBRID PHLOXES (PHLOX DECUSSATA and PHLOX SUFFRUTICOSA).

1. COQUELICOT.
2. ETNA.
3. MRS. CROLL.
4. SYBILLE.
5. SNOWDON.
6. MRS. JENKINS.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

WINTER CHERRIES.

Physalis Alkekengi L.

AND

Physalis Franchetti *Mast.*

(*See Plate 37.*)

PHYSALIS ALKEKENGI cannot be called a beautiful flowering plant. The small white blossoms are in fact very insignificant, and it would never have been introduced as a garden plant except for the beauty of its comparatively large orange-scarlet fruits, each enclosed in a balloon-shaped calyx, which is green at first, but gradually changes into a brilliant orange-scarlet. Even in winter, long after the leaves have fallen, these calyxes still adhere to the plants, but during frosty weather they become skeletonised, looking like little balloons veiled with lace, through which the orange-scarlet fruits of the size of cherries are distinctly visible. These balloons are highly ornamental both before and after the skeletonising, and it is no wonder that they are much sought after by florists, who use them in a dry state for all kinds of winter bouquets of dried flowers, grasses, thistles, &c. A very pretty combination are sprays of this Winter Cherry with dried sprigs of the old-fashioned Honesty (*Lunaria biennis*), the flat silvery seed-pods of which form a capital contrast to the scarlet *Physalis*. Its native home is the Caucasus and China. The plant grows about 1½ to 2 feet high, and has underground creeping stems after the manner of stroil, and is therefore very apt to spread like a weed unless kept in proper check. It is well adapted for a border, where it can be kept under control, but should never be planted in rock-work, where its underground stems would spread out to the detriment of smaller plants.

PHYSALIS FRANCHETTI is of more recent introduction, and comes from Japan. It is in every way a grand improvement on the former, which it somewhat resembles, except that in all its parts it is much more robust, growing 2½ to 3 feet high, and bearing ballon-shaped orange-scarlet calyxes 3 to 4 inches long and 2½ to 3 inches in diameter. It is much neater in appearance, too, as it does not spread as rapidly underground as the older Winter Cherry. That this plant has a high decorative value goes without saying. The very large scarlet balloons with their fruits enclosed are indeed very striking. For winter decorations in rooms, for large vases, &c., the spikes of *Physalis Franchetti* are most valuable.

If the spikes are not cut before the leaves have fallen, the balloons will probably have become almost completely skeletonised. For most effective decorative purposes it is best to cut off the shoots close to the ground while the leaves are still green and while the majority of the calyxes would have their brilliant orange-scarlet colour still unimpaired by frosts. If these shoots are put into a dark place immersed in water the leaves will drop off naturally after a few days, and then the stems with their load of uninjured balloons may be dried, and form highly ornamental objects, lasting without water for the whole winter.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

PLATE 37.

WINTER CHERRIES.

1. PHYSALIS ALKEKENGI.
2. PHYSALIS FRANCHETTI.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

Physostegia virginiana, *Benth,*

AND

Physostegia virginiana alba.

(*See Plate 38.*)

PHYSOSTEGIA VIRGINIANA is a very handsome American perennial known also as *Dracocephalum speciosum* (*Sweet*) and as *Dracocephalum virginianum* (*L.*) The plant grows 2½ to 3½ feet high, and blooms from July to September. The shape of the labiate flowers, as will be seen by the Illustration (Fig. 1, Plate 38), somewhat reminds of heath. The colour is a pale rosy lilac. The stems are square and erect, the lower leaves are ovate, the upper ones lanceolate acute and deeply serrated.

PHYSOSTEGIA VIRGINIANA ALBA is a great improvement on the former, being a little more robust in its growth and bearing pure white flowers. Lilac or mauve flowers are not everybody's fancy, but pure white flowers of good substance are always acceptable.

Physostegias are not particular as to soil, and do well in ordinary light loam. Propagation is much facilitated by a fleshy rootstock, which sends out numerous rhizomes suited for easy division.

PLUMBAGO LARPENTÆ comes from Shanghai, and is also known as *Cerastoligma plumbaginoides.* It is not a flower for cutting, and in the northern counties it is not absolutely hardy unless protected; but in the western counties it grows like a weed and spreads rapidly underground. The great merit of this plant consists in its masses of flowers of the brightest possible cobalt-blue, and so abundantly produced during September and October as to form quite a dense carpet about 1 foot high. It thrives well in light soil even on a dry sunny slope where little else would grow, and is excellently suited for carpeting ground between taller plants.

POLEMONIUM CŒRULEUM, or "Jacob's Ladder," is a very old-fashioned and well known plant, which, however, must be mentioned as deserving a place among the most useful border-plants, growing 2½ feet high and bearing sky-blue flowers. Of this there is also a very pretty variegated form. Early summer.

POLEMONIUM CONFERTUM MELLITTUM grows only 1 foot high, and in May and June is covered with dense clusters of white flowers. Though a native of Colorado it has proved to be perfectly hardy, but prefers light soil and a sunny position. It is a grand plant forthe front of a border or for rock-work.

POLEMONIUM PAUCIFLORUM has pale yellow flowers, but is rather straggling in habit.

POLEMONIUM RICHARDSONI is a blue flowering variety about 18 inches high, and forming a compact bush, flowering in May and June.

POLEMONIUM RICHARDSONI ALBUM is a pure white variety of the former, and well worth a place in every garden.

POLYGONATUM MULTIFLORUM, the old well known "Solomon's Seal," is perhaps more interesting than really pretty, but certainly deserves a place in our gardens, especially if we can find for it the situation it likes best, *i.e.*, a damp shady corner where its elegantly arching stems would be in striking contrast to the surrounding vegetation, and where its numerous pendent white blossoms would show to advantage.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

PLATE 38.

1. PHYSOSTEGIA VIRGINIANA.

2. PHYSOSTEGIA VIRGINIANA ALBA.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

KNOTWEEDS.

Polygonum compactum, *Hook f.*,

Polygonum polystachyum, *Ware,*

AND

Polygonum sacchaliense, *F. Schmidt.*

(*See Plate 39.*)

Among the 150 or more varieties of Knotweed only comparatively few are suitable for our gardens. Among the best are the following :—

POLYGONUM COMPACTUM, from Japan, has a compact habit of growth, attaining a height little more than 2 feet. The shape of its erect racemes of white or cream-coloured flowers is well represented in Fig. 1, Plate 39. As the flowers do not appear till late in the season and last till October they are valuable on that account. The leaves are small leathery, and of a darker green than most other varieties

POLYGONUM POLYSTACHYUM (Fig. 2, Plate 39) is a native of the Himalayas, and forms a big bush 6 to 8 feet high. On account of the space required for its full development it is not suitable for the ordinary border, but makes a grand plant in the "wild garden." The white flowers appear late in the season and are borne in large panicles very suitable for the florist's work.

POLYGONUM SACCHALIENSE (illustrated by Fig. 3. Plate 39) is also essentially a plant for the "wild garden," preferably near a stream, where its gigantic proportions can show off to full advantage. The flowers appear from September to October, but are not as lasting as those of the two first named varieties. The plant grows 10 to 12 feet high and has angular striated stems.

I will now mention a few varieties of Polygonum not illustrated :—

POLYGONUM AMPLEXICAULE OXYPHYLLUM has long narrow sharp-pointed leaves and large feathery plumes of white flowers blooming in September. As the plant grows 5 or 6 feet in diameter its proper place is in the "wild garden" or in any other position where it may grow as it pleases without injury to other plants.

POLYGONUM BALDSHUANICUM is undoubtedly one of the best introductions of recent years. It forms not a bush like its cogeners, but is an elegant climber growing 20 feet high, and is admirably adapted for covering old tree-trunks, arches, &c. The leaves are cordate and the flowers are white, appearing in large elegant clusters at the ends of the branches ; they have a particularly light and feathery appearance, and generally bloom from June to September.

POLYGONUM CUSPIDATUM is also known as *Polygonum Sieboldi*, and forms a handsome bush 8 feet high, with a stately habit of growth, and best suited for a single specimen rising from the lawn or from ground carpeted with dwarf plants. As it has a habit of sending up fresh shoots a long distance from the old plant it must be kept well in check. The creamy white flowers appear late and are decidedly handsome.

POLYGONUM SPHAEROSTACHYUM is much smaller, growing not more than 2 feet in height, and bearing spikes of deep red flowers. It is a hardy Himalayan plant, well suited for a border, and also suitable for cutting.

POTENTILLA FORMOSA is a handsome perennial with dark-red flowers from the Himalayan Mountains, growing about 2 feet high, and growing well in light soil.

POTENTILLA HYBRIDA. By crossing Himalayan and other species an enormous number of hybrids have been raised, to which nurserymen have given separate names. There are single and double varieties, ranging from yellow to deep red, and most of them make excellent border plants, blooming in July.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

PLATE 39.

KNOTWEEDS.

1. POLYGONUM COMPACTUM.
2. POLYGONUM POLYSTACHYUM.
3. POLYGONUM SACCHALIENSE.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

Primula cortusoides L.

AND

Primula cortusoides Sieboldi.

(*See Plate 40.*)

The varieties of Primroses here illustrated form quite a distinct type among hardy Primulas.

PRIMULA CORTUSOIDES (Fig. 1, Plate 40) is a native of Siberia, and grows about 10 inches high, bearing umbels of purplish rose flowers, blooming in early spring, usually in April. Light soil, with a little leaf-mould and a position not too much shaded, will suit this plant admirably. The leaves are wrinkled and coarsely crenate with serrated sub-divisions. Sometimes *Primula cortusoides* will flower a second time in August or September. During winter the plants die down entirely, but come up again strongly in the spring. A slight covering of cocoanut fibre during winter is very beneficial.

PRIMULA CORTUSOIDES SIEBOLDI, though now considered only a large flowering variety of *P. cortusoides*, differs from the type in many particulars. Its native home is Japan. Its flowers as well as its leaves are larger and broader than in the type; it has a creeping rootstock, and flowers in spring only. The flowers appear on stems 10 inches high and vary in colour as much as the Chinese Primulas (*P. sinensis*). In a border sheltered from rough winds (which would strip the flowers) this is a charming spring flower, looking most effective in groups. On rock-work, too, it flourishes admirably, and will often seed itself, young plants springing up from small crevices, &c., which at first sight would appear quite unsuitable. There are many dozens of varieties, all separately named, and many of them of great merit. Among the most distinct are: *Alba magna*, large pure white; *Bruce Findlay*, heliotrope-blue; *Diane*, light purple; *Harry*, crimson and white; *Lilacina*, lilac; *Vincaeflora*, blue; *Queen of Whites*, pure white; *William Clibran*, white tinged with mauve. Several shades are illustrated by Figs. 2—5, on Plate 40.

The small Alpine Primulas and other miniature kinds are, of course, beyond the scope of this work, but I will mention just a few of the more robust growing kinds.

PRIMULA CAPITATA is a handsome Himalayan Primrose, bearing in summer dense globular heads of violet-blue flowers apparently dusted all over with a mealy powder. It grows 10 inches high. The leaves are oblong, dentate, of wrinkled appearance, and covered with a mealy powder on the under-side. It is undoubtedly a beautiful Primrose, but unfortunately it is very apt to die off after flowering, especially during a wet season. It should be protected against excessive wet during winter. It is easily propagated by seeds, but plants so raised do not flower till the second year.

PRIMULA DENTICULATA is another Himalayan species, of more robust growth than the last. It grows about 12 inches high, and bears numerous bright lilac flowers during early summer. The leaves are hairy on both sides, especially on the under-side. It prefers moist leaf-mould to any other soil.

PRIMULA DENTICULATA VAR. CASHMERIANA comes from Cashmere as the name implies. It has flowers of light purple colour with yellow eye, forming a dense globular head somewhat similar to *P. capitata*, covered with a farinose powder, and growing about 12 inches high. Though loving a moist and sunny position it is apt to rot off during the winter unless protected against water lodging in its crown.

Other Primulas are described in connection with the next Plate.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

PLATE 40.

1. PRIMULA CORTUSOIDES.

2-5 GARDEN VARIETIES OF PRIMULA CORTUSOIDES SIEBOLDI.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

OXLIPS

AND OTHER VARIETIES OF PRIMULA.

Primula elatior gigantea.

(*See Plate 41.*)

PRIMULA ELATIOR GIGANTEA in its various garden forms has been much improved of late, and the coloured Plate No. 41 gives a good idea of some of the newer kinds. For spring bedding or early display in borders, &c., *Primula elatior* plays an important part. Propagation is best effected by seeds, or by division after flowering.

PRIMULA IMPERIALIS is a recent introduction from Java, and grows over 2 feet in height. It is somewhat like *Primula japonica* in shape, but the flowers are of a rich yellow colour. Unfortunately it is not perfectly hardy everywhere, but in sheltered parts of Cornwall I have seen it flourishing admirably.

PRIMULA JAPONICA is a gem among hardy plants, growing generally about 2 feet high, the flowers appearing in April and May, arranged in whorls, and of a deep crimson-magenta colour of striking beauty. This Japanese Primrose often seeds itself and becomes naturalized in woods and moist places. Under favourable circumstances, such as would be afforded by the margin of a sheltered pond and in the shade of trees, *Primula japonica* will often luxuriate, growing a yard or more in height. In the well-known Cornish garden at Enys there is a border of *P. japonica* over 100 yards long and more than a yard wide which is yearly ablaze with myriads of flowers quite 3 feet high.

There are various other forms, such as *Primula japonica rosea* with pink flowers, *Primula japonica alba* bearing white flowers with a yellow eye, &c., &c.

PRIMULA POISSONI is a Chinese species, and has bright purplish rose flowers arranged in whorls similar to those of *P. japonica*, but flowering late, *i.e.*, from July to September.

PRIMULA SIKKIMENSIS, from Sikkim Himalaya, grows 2 to 2½ feet high and loves a half-shady moist position near the margin of a pond or stream with at least partial shelter from rough winds. Peat or leaf-mould should be mixed with the soil to ensure its success. The drooping flowers are of a beautiful golden yellow, and bloom in spring or early summer, forming a good succession to *Primula japonica*. It is easily propagated by seeds.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

PLATE 41.

VARIOUS FORMS OF "OXLIPS."

PRIMULA ELATIOR GIGANTEA, IN VARIETY.

Digitized by Google Original from UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

Pyrethrum roseum. *Lindl.*

(*See Plate 42.*)

PYRETHREUM ROSEUM was first introduced from the Caucasus. Its handsome fernlike foliage, its showy flowers attaining the height of 2 to 2½ feet, and its great hardiness, have long stamped it as one of our most useful garden plants, whose value is greatly enhanced by the fact that its flowers are among the most desirable of all hardy flowers for cutting purposes. The double forms are almost Aster-like in appearance, while the single forms might be compared to huge daisies in glorious colours, including the brightest crimson, brilliant carmine, white, pink and cream colour in various shades. For cutting the single varieties are even more useful than the double ones. Both make handsome border plants, growing in almost any soil, but they are thankful for a little manure occasionally.

It is impossible here to describe even a tithe of the enormous number of hybrids in commerce, and I will therefore mention only just a few of the very best.

DOUBLE VARIETIES.—*Aphrodite*, pure white. *Ceres*, soft pink. *Madame Munier*, flesh colour. *Melton*, crimson. *Mons. Barral*, rosy red. *Ne plus ultra*, blush white. *Olivia*, large, pure white. *Peau Rouge*, pink. *Sam Bunburgh*, the finest white for cutting. *Virgo*, cream colour. *Voie lactée*, white, suffused pink.

SINGLE VARIETIES.—*Beatrice Kelway*, cherry-rose. *Duke of Connaught*, carmine. *Mrs. Bateman Brown*, crimson. *James Kelway*, scarlet crimson. *Merry Hampton*, crimson. *Lorna Doone*, crimson-maroon. *Mary Anderson*, flesh colour. *Mr. Santley*, carmine. *Princess Irene*, white. *Princess Marie*, large, pure white, very fine form. *Princess of Wales*, flesh colour. *Rosy Morn*, pink.

PYRETHRUM TCHIHATCHEWII can hardly be called a beautiful flower, inasmuch as it resembles the common ox-eye daisy and grows scarcely a foot high, but it deserves mentioning on account of its evergreen very rapidly spreading foliage, which will cover with verdure even the poorest soil, where scarcely anything else would grow.

PYRETHRUM ULIGINOSUM has been described in connection with Plate 14 as *Chrysanthemum uliginosum*.

RHEXIA VIRGINICA (*Meadow Beauty*) is a handsome American perennial, which—in order to do well—however, requires a light boggy peat soil and partial shade. It has bright rosy purple flowers growing about 1 foot high.

ROMNEYA COULTERI, the great *Californian Tree Poppy*, must be mentioned as a remarkably handsome plant. It is not quite hardy in the northermost counties, but in the midlands, and especially in the southern counties, it forms a grand bush 6 feet to 8 feet high, bearing delicate-looking fragrant white flowers 5 inches across, looking like crumpled silk, and emitting a pleasant fragrance. When cut as buds the flowers will travel well and open in water, lasting quite a long time. A deep light soil and a warm sunny position suit it best. When once planted it resents disturbance of its roots and does not transplant well.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

PLATE 42.

PYRETHRUM ROSEUM,

IN SINGLE AND DOUBLE FORMS.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

CONE-FLOWERS.

Rudbeckia fulgida, *Ait*,
Rudbeckia maxima, *Nutt*,
Rudbeckia laciniata fl. pl. "Golden Glow,"
AND
Rudbeckia speciosa, *Wender* (*Syn. R. Neumanni*).

(*See Plate 43.*)

The Cone-flowers, or Rudbeckias, are perennials of the first class and natives of North America. Their flowers possess the merit of appearing mostly at a time when blooms are getting scarce, and as individual blossoms will often last for weeks, they are doubly welcome on that account. All of them, moreover, have long stems and are well adapted for cutting.

RUDBECKIA ANGUSTIFOLIA has been dealt with under the name of *Echinacea angustifolia*, and is illustrated on Plate 19.

RUDBECKIA CALIFORNICA grows about 4 feet high, and has solitary flower-heads with golden yellow ray-florets 2 inches or so in length. The central cone or disc is cylindrical. The leaves are oblong-lanceolate, and remind of Plantain. Flowering season July to September.

RUDBECKIA COLUMNARIS is by many botanists considered distinct from the genus Rudbeckia, and is now also called *Lepachys columnaris*. It has a more light and elegant habit than most Rudbeckias. It grows about 4 feet high and blooms from July to September. The flowers are pale yellow, and have deflexed petals with a brown cone, and stand up erect on branching stems.

RUDBECKIA DIGITATA is an elegant species with flowers rather smaller than the type

RUDBECKIA FULGIDA (see Fig. 1, Plate 43) grows about 3 feet high and has large deep orange colour flowers with a dark purple disc, blooming most abundantly in July and August.

RUDBECKIA HIRTA is an early-flowering species with golden yellow flowers bearing a brown velvety cone in the centre. It grows about 2 feet to 2½ feet high, and begins to flower as early as June.

RUDBECKIA LACINIATA is a stately plant growing 5 to 6 feet high, having handsome deeply-lobed and laciniated leaves, and very substantial golden yellow flowers.

RUDBECKIA LACINIATA, "AUTUMN GLORY," is still more robust, its ray-florets having broad deep yellow petals. The flowers are very substantial, and as they may be cut with very long stems, they are excellent for filling large vases, &c.

RUDBECKIA LACINIATA FL. PL., "GOLDEN GLOW," (see Fig. 3, Plate 43) is also a very robust species growing 7 feet or 8 feet high, and bearing late in summer and early autumn numerous ball-shaped golden yellow double flowers of great dimensions.

RUDBECKIA MAXIMA (Fig. 2, Plate 43) is also very robust, growing 6 to 7 feet in height, and bearing on very stout erect stems large golden yellow flowers of great substance. The leaves are very large and glaucous, reminding more of a cabbage than of a composite flower.

RUDBECKIA MOSCHATA is a smaller species, with flowers slightly musk-scented.

RUDBECKIA PINNATA is now called *Lepachys pinnatifida* by some botanists; the flowers are pale yellow and resemble those of *R. columnaris*. It grows about 3½ feet high.

RUDBECKIA SPECIOSA (see Fig. 4, Plate 43) is perhaps better known by its older name of *R. Neumanni*. It is a well-known favourite, growing seldom more than 2 feet high and bearing an enormous number of orange-yellow flowers with a black velvety cone in the centre.

RUDBECKIA PURPUREA has been described and illustrated in connection with Plate 19 as *Echinacea purpurea*.

RUDBECKIA TRILOBA grows about 3 feet high and has small flowers which are most abundantly produced, blooming in August, and bearing a blackish purple disc. The plant is much branched and of elegant appearance.

All Rudbeckias are easily propagated by division, and are not particular as to soil or aspect.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

PLATE 43.

CONE-FLOWERS.

1. RUDBECKIA FULGIDA.
2. RUDBECKIA MAXIMA.
3. RUDBECKIA LACINIATA FL. PL. "GOLDEN GLOW."
4. RUDBECKIA SPECIOSA (SYN. R. NEUMANNII).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

CHOICE VARIETIES OF SCABIOUS.

Scabiosa caucasica alba.
Scabiosa caucasica fimbriata perfecta.
Scabiosa caucasica magnifica.
Scabiosa caucasica hybrida.

(*See Plate 44.*)

The Scabious has received much attention of late, with the result that many excellent hybrids have been raised which far surpass the older kinds. As they flower from August till late in the season, often till the end of September or even beginning of October, they form a useful material for brightening our gardens when the summer is on the wane, and as they have long stems and keep well they are an excellent material for cutting.

SCABIOSA CAUCASICA, the old well-known type, has lilac-coloured flowers about 2 to 2½ inches across and grows about 2 feet high.

SCABIOSA CAUCASICA ALBA (see Fig. 1, Plate 44) is a variety similar to the preceding, but with pure white flowers. It is one of the most useful flowers of recent introduction, and is splendidly adapted for cutting.

SCABIOSA CAUCASICA FIMBRIATA PERFECTA (see Fig. 2, Plate 44) is a distinct variety with lilac-blue flowers suffused with white towards the centre and having the outer petals beautifully fringed.

SCABIOSA CAUCASICA FIMBRIATA PALLIDA is quite a new form, distinguished by having flowers of a very pale blue colour.

SCABIOSA CAUCASICA MAGNIFICA (see Fig. 3, Plate 44). Under this name Messrs. Robert Veitch & Son, of the Royal Nurseries, Exeter, grow a truly magnificent form, which eclipses all other Scabious. The flowers measure 3 to 4 inches across, and are not only much more substantial than those of the typical *Scabiosa caucasica*, but their colour is a much deeper blue. The construction of the flower, too, is different. While the typical plant has flowers with only a few fully developed ray-florets, *S. c. magnifica* has two or three rows of well-shaped outer petals. The illustration in the centre of Plate 44 gives an accurate picture of this flower. During the second year after planting, when the plant has become well established, the difference between *S. c. magnifica* and the old *S. caucasica* becomes still more pronounced. The long erect stems enhance its value as a flower for cutting.

SCABIOSA CAUCASICA HYBRIDA. Various other forms of Scabious are also illustrated on Plate 44 under Figs. 4 to 6 as *Scabiosa c. hybrida*. These forms are not yet sufficiently constant and vary considerably in shape as well as in colour, some of them bearing double flowers. There is also a decided break towards a pink colour, but as yet the colour is not sufficiently pure.

SCABIOSA OCHROLEUCA is a tall robust species with yellowish white flowers, which, however, is rather straggling in its mode of growth and is more adapted for a "wild garden."

SCABIOSA PARNASSI, or more correctly called *Pterocephalus Parnassi*, is a very dwarf species unsuitable for cutting, but excellent for forming a low carpet between taller plants. It has woolly leaves and pink flowers scarcely more than 9 inches above the soil.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

PLATE 44.

CHOICE VARIETIES OF SCABIOUS.

1. SCABIOSA CAUCASICA ALBA.
2. SCABIOSA CAUCASICA FIMBRIATA PERFECTA.
3. SCABIOSA CAUCASICA MAGNIFICA.
4–6. SCABIOSA CAUCASICA HYBRIDA.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google

Original from UNIVERSITY OF MICHIGAN

TYERMAN'S GROUNDSEL.

Senecio pulcher. *Hook. & Arn.*

(*See Plate 45.*)

SENECIO PULCHER, or *Tyerman's Groundsel*, as it is popularly called, was introduced by the late Mr. Tyerman from Uruguay, and flourished well in his garden near Truro, Cornwall. It is now well distributed, and must rank amongst the handsomest of autumn-flowering plants, bearing clusters of bright crimson-purple flowers with yellow disc on stems about 2 feet to 2½ feet high. The leaves are leathery and glossy, comparatively large oblong-lanceolate in shape, with a dentate margin. Its flowering season, as a rule, does not begin till September and lasts till cut down by frost.

Of other forms of *Senecio* the following must be mentioned :—

SENECIO DORONICUM is a handsome perennial, flowering during early summer, and bearing on stems about 2 feet high deep golden yellow flowers about 2 inches in diameter. It loves a sunny border and is very ornamental.

SENECIO HERITIERI is a native of Teneriffe, and is hardy only in warm sheltered places in the south or west. Even in Devonshire it will not stand the winter, but in several parts of Cornwall, notably at Enys, it is doing exceedingly well. The plant grows about 2 feet to 2½ feet high, and has grey woolly cordate orbicular leaves resembling in shape a small Cineraria leaf. The flowers, too, look very much like those of a Cineraria and are blue and white in colour. It requires a warm sunny position.

SENECIO JAPONICUS, as its name implies, is of Japanese origin ; it is a very handsome perennial, but requires plenty of moisture and thrives best by the margin of a pond or bogbed. It grows 4 feet or more in height and has handsome deep golden yellow flowers quite 4 inches across. The leaves, too, are handsome, being palmate in shape, but deeply divided, and measuring about 9 inches across.

SENECIO PETASITES grows 6 to 8 feet high in Cornwall, and retains its handsome large velvety leaves all the winter, but at Exeter it dies down to the ground every year. In the northern and midland counties it is not hardy. Where it does well it is a handsome and striking plant with clusters of numerous bright yellow flowers.

SIDALCEA CANDIDA is a good border plant of the mallow type, with pure white flowers, and growing 2½ feet high, but the flowers do not last well when cut.

SIDALCEA MALVÆFLORA LISTERI is a decided improvement on the original *S. malvæflora*, having very pretty fringed pink flowers.

SOLIDAGO VIRGAUREA, the old-fashioned *Golden Rod*, certainly deserves a place among "the best perennials," its handsome golden yellow flowers appearing late in autumn and growing 4 feet high, making a most useful display when summer flowers generally are gone.

STATICE LATIFOLIA is a most useful and attractive perennial, furnishing large sprays of small lavender-blue flowers, which will last a long time when cut.

STOKESIA CYANEA also deserves attention on account of its beautiful large blue flowers appearing late in the season when most flowers have finished blooming.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

PLATE 45.

TYERMAN'S GROUNDSEL.

SENECIO PULCHER.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

GLOBE FLOWERS.

Trollius asiaticus L.,

Trollius asiaticus, "Orange Globe,"

Trollius europæus L.

AND

Trollius europæus sulphureus.

(*See Plate 46.*)

The *Globe Flowers* have long been favourites in our gardens, and justly so. Their compact and erect style of growth and their bright flowers in spring or early summer make them most desirable either in the garden, where masses grouped together will give a particularly bold effect, or for cutting purposes. They are decided lovers of moisture, and the most suitable soil for them is a rich loam with moist subsoil.

TROLLIUS ASIATICUS (see Fig. 1, Plate 46) looks almost insignificant by the side of the larger varieties. It flowers in May or June, and is distinguished from other sorts by having its leaves more divided. The colour of the flowers is orange.

TROLLIUS ASIATICUS, "ORANGE GLOBE," is a variety of the former, but, as shown by the illustration (Fig. 2, Plate 46) it is far superior to the type, having bright deep orange-coloured flowers fully 2½ inches across. This is of comparatively recent introduction, and a decided acquisition. In its style of growth generally it is more robust than the original type, growing 2½ feet high.

TROLLIUS EUROPÆUS (Fig. 3, Plate 46) is a British plant widely distributed over many parts of Europe, but is well deserving a place in our gardens, especially if conditions favourable to its growth, such as mentioned above, can be found for it. The bright golden yellow globular flowers are decidedly handsome, and appear in May and June.

TROLLIUS EUROPÆUS GIGANTEUS is, as the name implies, a more robust species, attaining the height of 2½ feet or more, but in other respects similar to the type.

TROLLIUS EUROPÆUS SULPHUREUS (Fig. 4, Plate 46) has pale lemon coloured flowers. This is the variety often called *Trollius albus*. Its flowers are comparatively small, and it seldom grows more than 15 or 18 inches high.

TROLLIUS JAPONICUS has orange-yellow flowers about 15 inches high, and occurs also with fine double flowers.

TROLLIUS NAPELLIFOLIUS is a very showy pale orange species found in the Carpathian Mountains. The blossoms are quite 2 inches across.

VERONICA LONGIFLORA SUBSESSILIS is perhaps the finest of the tall growing herbaceous Veronicas. It grows about 2½ feet high, and bears dense racemes of dark blue flowers, lasting till late in the autumn. For cutting they are scarcely suitable, as the petals drop quickly when cut. But for general use in borders, &c., it makes a highly effective display at a time of the year when flowers are getting scarce. Shrubby Veronicas and the dwarf alpine species can, of course, not be considered here.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

PLATE 46.

GLOBE-FLOWERS.

1. TROLLIUS ASIATICUS
2. TROLLIUS ASIATICUS "ORANGE GLOBE"
3. TROLLIUS EUROPÆUS
4. TROLLIUS EUROPÆUS SULPHUREUS

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

TUFTED PANSIES.

Viola cornuta L.

AND

Hybrid forms (Violas).

(*See Plate 47*).

VIOLA CORNUTA (Fig. 1, Plate 47) is a native of Switzerland and Spain, and has long been cultivated in gardens; it has small purplish blue flowers blooming from May to June, and grows about 10 to 12 inches high. The plant is also known as the "horned Pansy."

VIOLA CORNUTA HYBRIDA was obtained by crossing the typical "horned Pansy" with large flowering Show Pansies (*Viola tricolor maxima*). Though the latter is only biennial, the hybrids raised by crossing the "horned Pansy" and the "Show Pansy" are perennial, and retain the full vigour of the original *Viola cornuta*, while their flowers are most abundantly produced and are often nearly the size of the Show Pansies. They are now generally called *Violas or Tufted Pansies*, and have long been reckoned among the most useful plants for spring bedding or for almost continuous display in borders, as they frequently flower a second time later in the summer and even towards autumn. Planted out during the autumn they will flower abundantly next spring. A somewhat moist well-manured soil suits them better than a dry position. Division in autumn and spring is the best mode of propagation.

An excellent way of using *Tufted Pansies* is for the purpose of forming a carpet covering the soil between taller plants. Even for beds of Roses they may be used with capital effect. We may have, for instance, white or delicately-coloured Tea Roses springing from a carpet of blue *Viola*, or *Paeonies* with gorgeous red flowers from a carpet of white or yellow tufted Pansies, &c., &c. For any such arrangements, however, it will be well to group distinct colours together in masses and not in a sort of general mixture.

Among the enormous number of named varieties in cultivation I will mention only the following: —

Admiration, a purple self; *Amy Barr*, pink, veined white; *Archibald Grant*, dark violet-blue; *Butterfly*, white edged rose; *Bedding Rose*, mauve; *Blue Gown*, lavender blue, without rays; *Calliope*, deep yellow; *Countess of Warncliffe*, pure white; *Crimson King*, purple-red; *Dove*, creamy white, and without rays; *Endymion*, pale yellow; *George Ford*, primrose-yellow; *Katie May*, bright yellow; *Lord Malcolm*, purple self; *Melampus*, yellow; *Pembroke*, yellow self; *Sitvia*, creamy white; *True Blue*, the best of all blues; *White Duchess*, white, edged with blue.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

PLATE 47.

TUFTED PANSIES.

1. VIOLA CORNUTA (TYPE). 2—5. HYBRID FORMS OF VIOLA CORNUTA.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

MEMORANDA.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

Wahlenbergia grandiflora, *Schrad,*

AND

Wahlenbergia grandiflora alba.

(See Plate 48.)

WAHLENBERGIA GRANDIFLORA (Fig. 1, Plate 48) is also known as *Platycodon grandiflorum*, and is a native of China and Manchuria. It grows about 18 inches to 2 feet high, and bears clusters of showy dark blue flowers shaped like those of a rather flat corolla of *Campanula*, to which it is allied. But while *Campanulas* generally flower in June and July *Wahlenbergias*, as a rule, do not appear till the end of July and throughout August. Propagation is best effected by seeds, as the fleshy tuberous roots cannot well be divided with success until several years old. Seeds sown in April or May will not produce flowering plants till the following year.

WAHLENBERGIA GRANDIFFLORA ALBA, *Syn. Platycodon grandiflorum album* (Fig. 2, Plate 48), is not a pure white, as the name would imply, but has its flowers tinged with pale blue, especially on the reverse side of the corolla. In other respects it is similar to the preceding. Both do better in a slighty shaded than in a sunny position. *Wahlenbergia sinensis* and *Wahlenbergia autumnalis* are only robust forms of *Wahlenbergia* (*Platycodon*) *grandiflora.*

WAHLENBERBGIA MARIESII, or *Platycodon Mariesii*, is a dwarf and compact form with flowers rather larger than those of *Wahlenbergia grandiflora*, and of the same dark blue colour, but growing only 12 inches high.

WAHLENBERGIA MARIESII ALBA is a handsome variety of the former. The flowers are white, tinged with pale porcelain-blue at the back.

WALDSTEINIA FRAGARIOIDES is a pretty North American perennial, with bright yellow flowers on stems 10 to 12 inches high, and blooming in May. It is a good plant for forming a carpet between taller plants.

WALDSTEINIA TRIFOLIA flowers earlier than the last, often in April; it is a native of Eastern Europe, and has numerous golden yellow flowers growing about 9 or 10 inches high. It is an excellent plant for the front of a border or for level places in a rock-garden.

WULFENIA CARINTHIACA, from the Carinthian Alps, grows about 12 inches high, and is a handsome plant for borders or rockwork. It bears in summer spikes of showy purplish blue flowers, and prefers a moist sandy soil.

ZAUSCHNERIA CALIFORNICA SPLENDENS must certainly be mentioned among "the best perennials," although in the north it is not quite hardy. In the southern and midland counties, however, it is a most valuable plant on account of its blooming till very late in the autumn. Its flowers are of brilliant vermillion scarlet. The plant has small woolly leaves, and grows about 18 inches high, succeeding best in a warm, dry, and sunny position. Its semi-prostrate habit makes it well suited for hanging over bold rocks, banks, or walls. It is easily propagated by cuttings. The variety *Splendens* is more robust than the typical *Zauschneria californica*, but the latter produces flowers in greater abundance.

Digitized by Google

Original from UNIVERSITY OF MICHIGAN

PLATE 48.

1. WAHLENBERGIA GRANDIFLORA (*Syn.* PLATYCODON GRANDIFLORUM).

2. WAHLENBERGIA GRANDIFLORA ALBA (*Syn.* PLATYCODON GRANDIFLORUM ALBUM

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Digitized by Google
Original from
UNIVERSITY OF MICHIGAN